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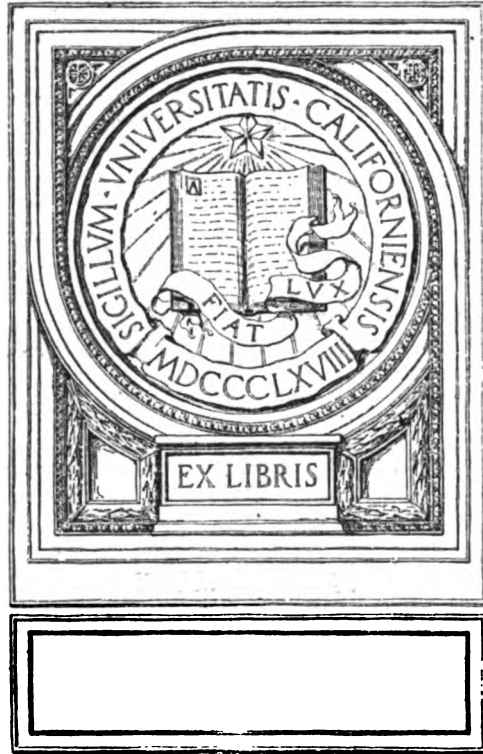
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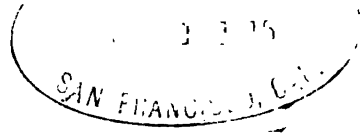


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MANUAL OF REGULATIONS
OF THE
BUREAU OF MINES



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U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
JOSEPH A. HOLMES, DIRECTOR

MANUAL OF REGULATIONS OF THE BUREAU OF MINES

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DEPARTMENT OF THE INTERIOR.

BUREAU OF MINES.

WASHINGTON, D. C., *February 10, 1915.*

To all employees:

The regulations contained in this manual are intended to govern the work of the Bureau of Mines in Washington and in the field. Employees are expected to read the regulations carefully and to observe them closely.

J. A. HOLMES,
Director.

Approved:
Bo SWEENEY,
Assistant Secretary.

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FEBRUARY 11 1915
BUREAU OF MINES

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MANUAL OF REGULATIONS OF THE BUREAU OF MINES.

ORGANIC ACT.

The Bureau of Mines was established by an act of Congress (36 Stat., 369) approved May 16, 1910, and effective July 1, 1910. This act reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby established in the Department of the Interior a bureau, to be called the Bureau of Mines, and a director of said bureau, who shall be thoroughly equipped for the duties of said office by technical education and experience and who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall receive a salary of six thousand dollars per annum; and there shall also be in the said bureau such experts and other employees as may from time to time be authorized by Congress.

SEC. 2. That it shall be the province and duty of said bureau and its director, under the direction of the Secretary of the Interior, to make diligent investigation of the methods of mining, especially in relation to the safety of miners, and the appliances best adapted to prevent accidents, the possible improvement of conditions under which mining operations are carried on, the treatment of ores and other mineral substances, the use of explosives and electricity, the prevention of accidents, and other inquiries and technologic investigations pertinent to said industries, and from time to time make such public reports of the work, investigations, and information obtained as the Secretary of said department may direct, with the recommendations of such bureau.

SEC. 3. That the Secretary of the Interior shall provide the said bureau with furnished offices in the city of Washington, with such books, records, stationery, and appliances, and such assistants, clerks, stenographers, typewriters, and other employees as may be necessary for the proper discharge of the duties imposed by this act upon such bureau, fixing the compensation of such clerks and employees within appropriations made for that purpose.

SEC. 4. That the Secretary of the Interior is hereby authorized to transfer to the Bureau of Mines from the United States Geological Survey the supervision of the investigations of structural materials and the analyzing and testing of coals, lignites, and other mineral fuel substances and the investigation as to the causes of mine explosions; and the appropriations made for such investigations may be expended under the supervision of the Director of the Bureau of Mines in manner as if the same were so directed in the appropriations acts; and such investigations shall hereafter be within the province of the Bureau of Mines, and shall cease and determine under the organization of the United States Geological Survey; and such experts, employees, property, and equipment as are now employed or used by the Geological Survey in connection with the subjects herewith transferred to the Bureau of Mines are directed to be transferred to said bureau.

SEC. 5. That nothing in this act shall be construed as in any way granting to any officer or employee of the Bureau of Mines any right or authority in connection with the inspection or supervision of mines or metallurgical plants in any State.

SEC. 6. This act shall take effect and be in force on and after the first day of July, nineteen hundred and ten.

The foregoing act establishing the bureau was amended by an act (37 Stat., 681) approved February 25, 1913, and effective on that date. This amended act, which constitutes the present organic law of the bureau, reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the act to establish in the Department of the Interior a Bureau of Mines, approved May sixteenth, nineteen hundred and ten, be, and the same is hereby, amended to read as follows:

That there is hereby established in the Department of the Interior a bureau of mining, metallurgy, and mineral technology, to be designated the Bureau of Mines, and there shall be a director of said bureau, who shall be thoroughly equipped for the duties of said office by technical education and experience and who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall receive a salary of six thousand dollars per annum; and there shall also be in the said bureau such experts and other employees, to be appointed by the Secretary of the Interior, as may be required to carry out the purposes of this act in accordance with the appropriations made from time to time by Congress for such purposes.

SEC. 2. That it shall be the province and duty of the Bureau of Mines, subject to the approval of the Secretary of the Interior, to conduct inquiries and scientific and technologic investigations concerning mining, and the preparation, treatment, and utilization of mineral substances with a view to improving health conditions, and increasing safety, efficiency, economic development, and conserving resources through the prevention of waste in the mining, quarrying, metallurgical, and other mineral industries; to inquire into the economic conditions affecting these industries; to investigate explosives and peat; and on behalf of the Government to investigate the mineral fuels and unfinished mineral products belonging to, or for the use of, the United States, with a view to their most efficient mining, preparation, treatment, and use; and to disseminate information concerning these subjects in such manner as will best carry out the purposes of this act.

SEC. 3. That the director of said bureau shall prepare and publish, subject to the direction of the Secretary of the Interior, under the appropriations made from time to time by Congress, reports of inquiries and investigations, with appropriate recommendations of the bureau, concerning the nature, causes, and prevention of accidents, and the improvement of conditions, methods, and equipment, with special reference to health, safety, and prevention of waste in the mining, quarrying, metallurgical, and other mineral industries; the use of explosives and electricity, safety methods and appliances, and rescue and first-aid work in said industries; the causes and prevention of mine fires; and other subjects included under the provisions of this act.

SEC. 4. In conducting inquiries and investigations authorized by this act neither the director nor any member of the Bureau of Mines shall have any personal or private interest in any mine or the products of any mine under investigation, or shall accept employment from any private party for services in the examination of any mine or private mineral property, or issue any report as to the valuation or the management of any mine or other private mineral

property: *Provided*, That nothing herein shall be construed as preventing the temporary employment by the Bureau of Mines, at a compensation not to exceed ten dollars per day, in a consulting capacity or in the investigation of special subjects, of any engineer or other expert whose principal professional practice is outside of such employment by said bureau.

SEC. 5. That for tests or investigations authorized by the Secretary of the Interior under the provisions of this act, other than those performed for the Government of the United States or State governments within the United States, a reasonable fee covering the necessary expenses shall be charged, according to a schedule prepared by the Director of the Bureau of Mines and approved by the Secretary of the Interior, who shall prescribe rules and regulations under which such tests and investigations may be made. All moneys received from such sources shall be paid into the Treasury to the credit of miscellaneous receipts.

SEC. 6. That this act shall take effect and be in force on and after its passage.

MINE INSPECTION IN ALASKA.

The provisions of the act for the protection of the lives of miners in the Territories (approved Mar. 3, 1891, 26 Stat., 1104, and amended July 1, 1902, 32 Stat., 631) were extended to Alaska in connection with the appropriations for the work of the Bureau of Mines, under the following clauses of the sundry civil acts of 1911 and 1912:

For salaries of two mine inspectors authorized by the act approved March third, eighteen hundred and ninety-one, for the protection of the lives of miners in the Territories, at two thousand dollars per annum each, four thousand dollars; and said inspectors are hereby authorized to inspect coal and other mines in the District of Alaska, to which district the provisions of said act are hereby extended and made applicable.

For salaries of two mine inspectors, authorized by the act approved March third, eighteen hundred and ninety-one, for the protection of the lives of miners in the Territories, five thousand dollars; and said inspectors are hereby authorized to inspect coal and other mines in the District of Alaska, to which District the provisions of said act, except so much as requires six months' residence in a Territory prior to appointment, are hereby extended and made applicable.

One of the two inspectors employed under the foregoing provisions occupied the position of mine inspector for New Mexico, but upon the admission of New Mexico as a State this position became non-existent.

Under authority of these provisions the President appointed a mine inspector for Alaska, the appointment being effective July 1, 1911, to serve in that Territory under the direction of the Bureau of Mines. The office and headquarters of this inspector are at Juneau, Alaska.

INSPECTION OF MINES BELONGING TO INDIAN TRIBES.

The following order was issued by the Secretary of the Interior under date of February 11, 1913:

Authority having been conferred upon the Bureau of Mines to investigate the methods of mining and the possible improvement of conditions under which

mining operations are carried on, under the provisions of the act approved August 24, 1912, making appropriations for the Bureau of Mines for the fiscal year ending June 30, 1913 (37 Stat., 458), which reads as follows:

"For the investigation as to the causes of mine explosions, methods of mining, especially in relation to the safety of miners, the appliances best adapted to prevent accidents, the possible improvement of conditions under which mining operations are carried on, the use of explosives and electricity, the prevention of accidents, and other inquiries and technologic investigations pertinent to the mining industry, \$320,000 ";

the Bureau of Mines is hereby charged with the duty of inspecting the physical operations of the coal, asphalt, and other mines belonging to the Choctaw and Chickasaw Tribes of Indians in Oklahoma, and of all such mines belonging to Indians and Indian tribes, wheresoever located.

Under the authority of an act approved June 28, 1898, for the protection of the people of the Indian Territory, and for other purposes, and acts supplementary and amendatory thereof, authorizing the Secretary of the Interior to provide rules and regulations in regard to the leasing of oil, coal, asphalt, and other mineral lands in the Indian Territory (30 Stat., 495, p. 498), and the acts of Congress approved April 26, 1906 (34 Stat., 137), and May 27, 1908 (35 Stat., 312), you are directed to draft the necessary rules and regulations, from time to time, to be submitted for departmental approval, regarding the operation of leases of such Indian lands, and all other land leased by or subject to the approval of the Department of the Interior for mining purposes, including oil and gas, on the public domain.

WHERE THE BUREAU'S WORK IS DONE.

The headquarters of the Bureau of Mines is in Washington, D. C. Correspondence comes direct to this main office and is answered by the director or the assistant director.

The work of the bureau in connection with the examination of mine laws, the editing and publication of reports, the collection of mine-accident statistics, and the distribution of publications is done at the Washington office. Several of the scientific investigations of the bureau, chief of which are those relating to mineral technology and to peat, are conducted directly from that office. In the Washington office also are the laboratory for the analysis of coal purchased by the Federal Government and the office of the engineer in charge of the inspection of those purchases.

Investigations dealing with safety and efficiency in the iron and steel industries, the use of explosives in mining, the use of electricity in mines and metallurgical plants, and the efficiency of fuels are carried on chiefly at the experiment station of the bureau at Pittsburgh, Pa. The bureau also maintains an experiment station at San Francisco, Cal., and one at Denver, Colo., for the investigation of problems relating to the mining and treatment of various ores and minerals, with especial reference to the improvement of health conditions and the prevention of waste.

GENERAL ORGANIZATION.

The director exercises general supervision over all the work of the bureau.

The assistant director acts as chief clerk, aids the director in the conduct of the administrative work of the bureau, and during the absence of the director performs the duties of that office, in accordance with section 178, Revised Statutes.

The organization of the bureau embraces five general divisions, as follows: Administrative, mining, chemical, mechanical, and mineral technology.

All technical and other work not placed in either the mining, chemical, mechanical, or mineral technology division, as indicated in the following paragraphs describing the organization, is under the immediate supervision of the director. Such work at the present time includes the following: Safety and waste investigations in the mining and treatment of lead and zinc; safety and efficiency in ore concentration; investigations into the mining and treatment of ores, with special reference to safety and waste and the generation of noxious products in smelting; codification of mine-safety laws and regulations; collection of mine-accident statistics.

All new work that may be undertaken by the bureau will be under the immediate supervision of the director unless and until specifically assigned by him to some division.

ADMINISTRATIVE DIVISION.

The administrative division of the Washington office consists of the following sections: Correspondence and records, publications, editorial, disbursements and accounts, appointments, statistics, supplies and property, library, and drafting.

The administrative division of the Pittsburgh Experiment Station consists of the following sections: Correspondence and records, purchases, supplies and property, library and translation, computing, drafting and photography, and public service.

MINING DIVISION.

The mining division is in charge of the chief mining engineer, with headquarters at Pittsburgh, Pa. The work of this division includes the investigations in the field, experiments in mining, operation of mine-safety cars and stations, mine inspection in Alaska, and promotion of sanitary and healthful conditions in mines.

Under this division the bureau maintains five mine-safety stations situated as follows: Birmingham, Ala.; Knoxville, Tenn.; McAlester, Okla.; Pittsburgh, Pa.; and Seattle, Wash. It also maintains

eight mine-safety cars, with headquarters at the following points: Wilkes-Barre, Pa.; Pittsburgh, Pa.; Huntington, W. Va.; Evansville, Ind.; Ironwood, Mich.; Pittsburg, Kans.; Denver, Colo.; and Billings, Mont.

MECHANICAL DIVISION.

The mechanical division is in charge of the chief mechanical engineer, with headquarters at Pittsburgh. The work of this division includes inspection of Government coal purchases, conducted from Washington, D. C., and the following investigations conducted from Pittsburgh, Pa.: Testing fuels with especial reference to efficiency and the prevention of smoke in Government power and heating plants; special peat and lignite tests; the combustion of fuel in gas producers; investigation of special fuels; investigation of electricity in mining and metallurgy; and investigation of mining appliances.

CHEMICAL DIVISION.

The chemical division is in charge of the chief chemist, with headquarters at Pittsburgh. Its work includes chemical analyses of coal for the use of the Government; physical and chemical examination of explosives; chemical and physical investigation of coal-mine dust and gases; chemical and physical tests of Government fuels with special reference to efficient use, storage, spontaneous combustion, etc.; and analyses and tests of fuel gases.

DIVISION OF MINERAL TECHNOLOGY.

The division of mineral technology is in charge of the chief mineral chemist, with headquarters at Washington, D. C. The division investigates the production and use of the following minerals: Minor metals—aluminum, bismuth, chromium, etc.; rare metals—molybdenum, tungsten, radium, uranium, and vanadium; precious metals—iridium, osmium, platinum, and palladium; metalloids—arsenic, antimony, columbium, etc.; nonmetals—bromine, chlorine, silicon, etc.; nonferrous alloys; building materials—cement, granite, lime, marble, sand, etc.; abrasives—alundum, burrstones, carborundum, etc.; silicates and clays, clay products, feldspar, quartz, etc.; potash, phosphates, nitrogen; miscellaneous minerals—asbestos, asphalt, borax, fluorspar, fuller's earth, gems, graphite, pyrite, etc.; minerals used in pigments and mineral paints—barite, ocher, white lead, zinc oxide, etc.

CONDUCT OF THE BUREAU'S WORK.**GENERAL INSTRUCTIONS.**

Section chiefs shall be under the direction of their division chief. They shall have charge of investigations intrusted to them, and shall keep the division chief informed of the progress of their work.

Weekly progress reports must be made by field employees, on the forms provided for that purpose, and submitted not later than the morning following the last day of the week reported. The reports should show the nature of the work done each day.

Conferences concerning investigations being conducted at an experiment station may be freely carried on between members of a section or of different sections of the same division at that station, and also between members of different divisions, provided that the division chiefs concerned shall be informed of, shall approve, and shall be given an opportunity to attend such conferences.

All letters and memoranda between different divisions and sections shall pass through the offices of the respective division chiefs. If such memoranda or letters do not involve questions of policy, the matter need not pass through the office of the official in charge of the experiment station, but formal letters must pass through his office for proper recording.

Individual members of each section shall be subject to direction by the section chief, but a section chief shall not assign to a member of his staff a new investigation, nor send him on a journey, without the approval of the division chief. No journeys are authorized unless prior authority shall have been obtained from the Secretary, the director, or the assistant director and specific allotment for travel shall have been made.

AUTHORITY FOR PUBLICATION OF RESULTS OF INVESTIGATIONS.

Every employee shall have the right to suggest publication by the bureau of the results of his investigations. Such suggestion shall be given due consideration by the section and division chiefs, and, in the event of nonagreement with the suggestion, the member shall have the right of appeal, through the division chief and the official in charge of the office or experiment station, to the director, without prejudice to his position.

Each manuscript of a circular, bulletin, or technical paper, before submittal for publication, shall receive the approval of the section chief and subsequently of the division chief. The division chief

may, if he so desires, refer the manuscript to a committee within his division for review; and although neither the reviewing committee nor the section or division chief shall have the right to modify the text without the approval of the author, it shall be the privilege of such committee or section or division chief to indicate suggested corrections, additions, or alternative phraseology in the manuscript, such suggested changes to be submitted to the author for his consideration. In case of the nonapproval of the manuscript by the section and division chiefs, the author or authors shall have the right of appeal, through the division chief and the official in charge of the experiment station, to the director. This right of appeal should be exercised, however, only as a final resort.

When a manuscript shall have been approved by the section chief and by the division chief, it shall be submitted by the official in charge of the experiment station to the director; but if the manuscript appear to overlap the investigations of one or more of the other divisions, or if, for other reasons, the official in charge of the experiment station may consider it best to do so, he may refer the manuscript to a committee for a report thereon to be submitted, with the manuscript, to the director.

RELATIONS TO OWNERS AND OPERATORS OF MINES.

Employment by the Federal Government gives the employee no right or authority to enter upon private lands or property or into mines or mills owned by private persons or corporations.

If it is desired to go upon private mining property or enter a privately owned mine or mill, the consent of the owner, or, in case of a corporation, of the manager, superintendent, or other proper officer, should first be obtained, a statement being made to the owner or proper corporation officer that the applicant is an employee of the Federal Government, acting under the direction of the Bureau of Mines, that the proposed examination of the premises or investigation of the mine is purely for scientific purposes, and that, without the approval of the owners or managers of such property, the results of the investigations will not be published.

In no case shall any employee, expert, or agent of the Government, under the direction of the Bureau of Mines, conceal either his identity or his official position for the purpose of obtaining any information or any facts relating to mining properties or the operation of mines, nor shall any agreement be entered into by which an employee in any manner compromises his position or places any limitation upon his official duties.

RELATIONS TO STATE MINING DEPARTMENTS AND STATE MINE INSPECTORS.

The mining engineers and other employees of the bureau will be constantly brought in relations with State mining departments and State mine inspectors, particularly in time of disasters. At practically all such disasters one or more State inspectors will arrive promptly, and under the laws of most of the States the State inspector is placed in full charge of rescue operations. The employees of the bureau must, therefore, offer their assistance to the inspector and be subject to his orders.

It is advisable for a mining engineer to keep in frequent touch by letter and otherwise with the inspectors in the field in which he is working, so that he may become well acquainted with them and inspire confidence in the character and disinterestedness of his work.

MAKING PUBLIC INFORMATION OBTAINED DURING COURSE OF INVESTIGATIONS.

Employees of the bureau are expressly forbidden to communicate to any person or persons, in advance of actual publication by the bureau, any results arrived at or any information obtained during the course of the bureau's investigations. The only exceptions to this general rule are the following:

(a) Such information may be given out by permission of the Secretary of the Interior or the Director of the Bureau of Mines.

(b) Information regarding any defective mining devices, apparatus, or machinery, or with regard to possible improvements in the layout of the mine, with a view to preventing waste of material or lessening the danger of accidents, may be brought confidentially to the attention of the mine management.

(c) Analyses of gas and mine-air samples may be submitted to the mine management or to the State mine inspector whenever it is thought that such information may be of value in connection with the taking of precautions to prevent accidents.

Information of a confidential character, such as mine maps, drill records, and statistics of production, supplied by private parties or corporations, must be carefully guarded, and in the preparation of reports for publication must be used strictly in accordance with the conditions stipulated by the persons furnishing such information.

LECTURES AND ADDRESSES BY EMPLOYEES.

When employees of the bureau are requested to give lectures or to furnish newspaper or magazine articles concerning the work of the bureau, authority for such action should be asked of the director.

The request should be accompanied by a one-page abstract of the proposed remarks. In an emergency case, telegraphic authority should be requested, followed by submission of the written abstract.

General prior authority is given the mining engineers of the bureau to make addresses in connection with demonstrations and educational work on the mine-rescue cars; and similar authority is also given to foremen of rescue stations and of cars and to first-aid miners to give demonstrations with explanatory remarks concerning their work. All remarks concerning specific mine accidents should, however, be restricted to general statements relating to the supposed or probable cause of the accident and to means and methods of preventing similar future accidents.

TREATMENT OF THE PUBLIC.

Employees of the Bureau of Mines are required to treat with courtesy and politeness all persons with whom they may be brought in contact while engaged in the exercise of their official duties. Unfailing patience and good nature must be exercised in the treatment of visitors to the cars, stations, laboratories, and offices of the bureau, and in answering all requests for information regarding the work that the bureau is doing.

COLLECTION OF SPECIMENS.

Members of the bureau may make collections of ores and mineral specimens for use in connection with the investigations upon which they are engaged, such collections to be turned over, upon the completion of the investigations, to either the headquarters office or one of the field offices of the bureau, where they will form a part of the general collection of ores and minerals maintained by the bureau.

An employee of the bureau may also make a private collection of small specimens of ores and minerals, provided that the making of such collection interferes in no way with his duties to the bureau, and provided also that specimens collected in the course of official investigations, which are not already duplicated or equaled in value by similar specimens in the bureau's general collection, shall be turned over to the bureau to form a part of that collection.

An employee, while engaged in official investigations, shall not collect specimens for sale.

Specimens for official use, including specimens for exhibition at an office of the bureau, are not to be purchased without proper authorization, and reimbursement for such purchase is to be made by itemized voucher.

REGULATIONS GOVERNING THE PERSONNEL.**INTRODUCTION.**

The following regulations are set forth in somewhat general terms and are intended merely as a guide to the more detailed provisions of departmental regulations and of the civil-service act, rules, and Executive orders. A careful study of the civil-service act (22 Stat., 403), of the acts supplemental thereto and amendatory thereof, and of the rules and orders promulgated thereunder, as contained in the Civil Service Commission's pamphlet (edition of Sept. 1, 1914), is, therefore, essential.

GENERAL CLASSIFICATION.

The executive civil service may be classified as follows:

- (1) The classified service:
 - (a) Competitive positions.
 - (b) Excepted positions.
- (2) The unclassified service:
 - (c) Presidential positions subject to confirmation by the Senate.
 - (d) Positions of mere unskilled laborer.

APPOINTMENTS.**IN GENERAL.**

Appointment to positions in the Bureau of Mines is made either by the President (with or without confirmation by the Senate) or by the head of department. There are only two presidential officers in the bureau, the director and the mine inspector for Alaska, the former being appointed by the President and confirmed by the Senate and the latter being appointed by the President alone. All other appointments in the bureau are made by the Secretary of the Interior upon recommendation of the director. Original entrance to all positions below the presidential class (except those mentioned in schedules A and B of the Civil Service rules) is made as the result of examination and certification by the Civil Service Commission; but these positions may also be filled by the transfer, promotion, or reduction of employees already in the service or by the reinstatement of former employees.

PERMANENT APPOINTMENTS.

Except as provided in the following paragraph, prior approval must be obtained from the department at Washington, *through the bureau*, for the creation of new positions or the filling of vacancies,

existing or prospective. Request for the certification of eligibles will be made either upon the Civil Service Commission at Washington or upon its appropriate district secretary. The so-called "district system of certification" does not affect the powers of appointment and removal, which, being discretionary, can not be delegated, nor does it lessen in any degree the supervision of field services by the Washington officials.

The procedure to be followed in making selections from the eligible registers and the probationary and absolute features of appointment are set forth in detail in Civil Service rule VII.

The chief of the particular division or office will submit to the director, before the expiration of the six months' probation, a report concerning the service of the probationer and make specific recommendation either that the appointee be retained or that his services be terminated.

TEMPORARY APPOINTMENTS.

Temporary appointments are divided into—

(a) Those made pending the filling of a position permanently by certification, promotion, reduction, transfer, or reinstatement.

(b) Those made for job work, permanent appointment not being required.*

By reason of the fact that the filling of certain positions is handled through the district secretaries whereas other appointments are handled directly between the bureau and the commission, temporary appointments are again divided into: First, those coming under the district system and governed by the provisions of Civil Service form 131; and, second, those not coming under the district system and governed by the general provisions of rule VIII and minutes of the commission.

Appointment to positions included under class (a), above, may be made either under section 1 or section 2 of rule VIII without antecedent authority of the commission, but must be reported by letter to the commission when made. Prior approval must be obtained for any extension beyond the period indicated in these sections of the rule.

Appointment to positions included under class (b), above, which will not continue beyond 30 days, may also be made without prior approval of the commission, but must be reported by letter to the commission when made. Antecedent authority must be obtained for appointment for a longer period than 30 days. If an appointment for three months has been made from a register of the commission or authorized by the commission in the absence of a register, it may be

* Specialists in the field may be employed from time to time, in emergencies, for brief periods not exceeding seven days. Chiefs of field divisions should provide themselves with blank field-employment agreements to be used for this purpose.

continued for a further period, not exceeding three months, without the prior authority of the commission, but such extension must be reported by letter. No appointment of this class can be extended beyond six months without the prior approval of the commission, and authority for such extension can be granted only when the conditions are unusual and seem to the commission to justify, and for no purpose other than to complete the job of work for which the person was originally appointed.

The last day of service of temporary appointees should be promptly reported to the bureau on the form provided for the purpose.

In connection with mine disasters it may at times be necessary to give emergency employment to men who have been trained by the bureau in rescue work and first aid to the injured, utilizing the services of these men as a part of the volunteer rescue corps of the bureau. Under such circumstances employment agreements should be entered into on **Form 6-41**, stipulating the agreed rate of pay, which in no case is to exceed \$4 per diem when actually employed. Should a rescue man volunteer his services without pay, the compensation should be entered on the agreement as \$1 per diem and expenses.

TRANSFER.

Though not specifically authorized by the civil-service act and rules, transfers are generally recognized as necessary exceptions to open competition with certain restrictions in the matter of length and continuity of service, age limitations, apportionment, and examination. (Civil Service rule X.)

Transfers from one department to another follow the course indicated on the blank (Civil Service Commission's Form 383) provided for that purpose.

Transfers within the department, the preliminaries of which are arranged by agreement between bureau or division chiefs, do not ordinarily require the approval of the Civil Service Commission, but the prior consent of the commission must be obtained for those which involve questions of examination, apportionment, etc. In the case of a contemplated transfer within the bureau, the person in charge of the office or division to which the transfer is proposed should first consult the chief of the office or division from which the employee is suggested for transfer, and this preliminary should be arranged before the transfer is formally requested of the director.

PROMOTION.

In so far as the Civil Service Commission's requirements are concerned, promotions are subject only to age limitations and apportionment, and examination in cases where the entrance tests are

different. (Civil Service Rule XI.) The department has, however, seen fit to issue the following regulations, which further restrict promotions in this bureau:

(1) Routine promotions shall be made at one given time during the year; that is, July 1. Variations from this rule are admissible only under exceptional conditions, and especially such as obtain in the field service outside the District of Columbia.

(2) Promotions due to changes in personnel or duties may be made at any time as required by conditions, even though these promotions may involve changes in salary.

(3) New appointments may be made at any time as circumstances may demand, but, as far as practicable, these should be submitted at the end of each month.

(4) As far as practicable there shall be uniform salaries for the same or similar services, except as may be required by local conditions.

The recommendations of section or division heads are considered by a technical committee designated by the director, to whom the results of its findings are submitted. The director's consequent recommendations are submitted to the head of department for his consideration and action. The following grades and classes have been established for positions in this bureau:

CHEMICAL GRADES.

Chemists: Maximum salary, \$4,000; minimum, \$2,400 per annum, graded as follows: \$4,000, \$3,500, \$3,300, \$3,000, \$2,700, and \$2,400.

Assistant chemists: Maximum salary, \$2,160; minimum, \$1,620 per annum, graded as follows: \$2,160, \$1,980, \$1,800, and \$1,620.

Junior chemists: Maximum salary, \$1,500; minimum, \$1,080 per annum, graded as follows: \$1,500, \$1,320, \$1,200, and \$1,080.

Apprentices: Maximum salary, \$960; minimum, \$720 per annum, graded as follows: \$960, \$900, \$840, \$780, and \$720.

ENGINEERING GRADES.

Engineers: Maximum salary, \$4,000; minimum, \$2,400 per annum, graded as follows: \$4,000, \$3,600, \$3,300, \$3,000, \$2,700, and \$2,400.

Assistant engineers: Maximum salary, \$2,160; minimum, \$1,620 per annum, graded as follows: \$2,160, \$1,980, \$1,800, and \$1,620.

Junior engineers: Maximum salary, \$1,500; minimum, \$1,080 per annum, graded as follows: \$1,500, \$1,320, \$1,200, and \$1,080.

Apprentices: Maximum salary, \$960; minimum, \$720 per annum, graded as follows: \$960, \$900, \$840, \$780, and \$720.

Foremen miners: Maximum salary, \$1,800; minimum, \$1,500 per annum, graded as follows: \$1,800, \$1,620, and \$1,500.

First-aid miners: Maximum salary, \$1,320; minimum, \$1,080 per annum, graded as follows: \$1,320, \$1,200, and \$1,080.

CLERICAL GRADES.

Chiefs of division: Employees (mostly technical) who perform supervisory, executive, and administrative duties: Maximum salary, \$5,000; minimum, \$2,520

per annum, graded as follows: \$5,000, \$4,800, \$4,500, \$4,200, \$3,900, \$3,600, \$3,300, \$3,000, \$2,840, \$2,720, \$2,600, and \$2,520.

Senior clerks: Employees who are assigned to work largely supervisory or requiring the highest order of clerical ability, involving much original thought, consideration, and investigation. Examples of such work are the investigation of large and intricate cases, requiring familiarity with the laws and decisions of the courts, and with the department practice and policy and the drafting of action thereon; the conduct of such investigations with the aid of assistants whose work must be directed and correlated; services as paying teller with large responsibility; acting as chiefs of sections or divisions and preparing or laying out work for others. Maximum salary, \$2,400; minimum, \$1,800 per annum; graded as follows: \$2,400, \$2,160, \$1,980, and \$1,800.

Clerks: Employees who are assigned to work more or less routine, involving responsibility, special ability and original thought, consideration, and investigation. Examples of such work are directing and instructing clerks of lower grades; expert stenography; the ascertaining of facts independently in complicated cases and drafting action thereon; serving as confidential clerk to head of department or bureau; bookkeeping, involving an extensive knowledge of department records and precedents and the handling of intricate accounts; recording complex and difficult cases and properly indexing the same; service in purchasing and issuing supplies; service as paying teller; examining money accounts, requiring familiarity with the laws and with regulations and requirements of the Treasury Department. Maximum salary, \$1,740; minimum, \$1,500 per annum, graded as follows: \$1,740, \$1,620, and \$1,500.

Junior clerks: Employees who are assigned to work of a routine character requiring but little original thought or consideration but requiring judgment, responsibility, and special skill. Examples of such work are preparing briefs of paper in a case for recording; expert filing; examining property returns; issuance and distribution of supplies; examining vouchers and disbursing accounts under the application of simple standards and requirements; recording cases and transactions where considerable judgment is required to determine the relative importance of factors and preparing an adequate index thereof; the ascertaining of facts independently and drafting action on average cases; composing and preparing letters for official signature; stenography, requiring skill and practice; bookkeeping, involving a knowledge of the theory of accounts and departmental records and precedents. Maximum salary, \$1,440; minimum, \$1,200 per annum, graded as follows: \$1,440, \$1,380, \$1,320, \$1,260, and \$1,200.

Under clerks: Employees who are assigned to work of a simple or routine character, requiring care, accuracy, and skill. Examples of such work are mere copying and typewriting; simple indexing; filing cards and papers; briefing contents of letters or documents on back; preparing letters by filing blank forms for official signature; mailing or dispatching; easier stenography; simple bookkeeping, requiring but little knowledge of the theory of accounts. Maximum salary, \$1,140; minimum, \$720 per annum, graded as follows: \$1,140, \$1,080, \$1,020, \$960, \$900, \$840, 780, and \$720.

REDUCTION.

Reduction in grade or compensation may be made for delinquency or misconduct or for administrative reasons. If for the former, the persons whose reduction is proposed shall be furnished with a statement of the reasons and be allowed a reasonable time for per-

sonally answering the same in writing. If for the latter, the procedure may be limited to the filing of a statement of reasons with the order for reduction. (Civil Service rule XII.)

REINSTATEMENT.

A person separated without delinquency or misconduct may be reinstated at any time within one year, provided the position to which reinstatement is proposed does not require an examination different from that required for the position from which he was separated, in which case the proposed appointee must first pass an appropriate examination before the Civil Service Commission. The one-year limitation does not, however, apply to a person who served in the Civil War or the War with Spain and was honorably discharged, nor to his widow, nor an Army nurse of either war. (Civil Service rule IX.)

OATH OF OFFICE AND ASSIGNMENT TO DUTY.

The oath of office is a condition precedent to receiving salary, a new oath being required wherever there is a change which necessitates a new appointment. The chief clerk of the department and chief clerks of bureaus are authorized to administer oaths. Oaths of appointees outside of Washington, D. C., must be executed before a notary public (who may also be an employee of the department) or clerk of court.

By departmental order certificates of changes in the personnel must be dated and submitted for signature at least three days before the change is to become effective, and *appointees must not be assigned to duty before their appointments have been approved by the department*. Where, by reason of some extraordinary or unusual circumstance, a departure from these instructions is necessary, written explanation must be made by the chief of bureau, and the department will determine in each case whether the explanation is sufficient to justify an exception to the rule.

SEPARATIONS.

REMOVAL.

The requirements of notice and an opportunity to reply, in writing, to charges preferred apply only to persons in the competitive classified service, all other employees being removable at the pleasure of the appointing officer. (Civil Service rule XII.)

RESIGNATION.

Resignations should be promptly transmitted with the recommendation of the division or section chief, no other notice being required.

HOURS OF LABOR AND LEAVES OF ABSENCE.

The hours of labor and leaves of absence of employees of this bureau are governed by the department's current regulations on these subjects.

USE OF INTOXICATING LIQUORS.

Beer, wine, or intoxicating liquors of any sort must not be brought into or used in the cars, stations, laboratories, or offices of the bureau. A violation of this rule will be sufficient cause for summary removal from the service.

COMPENSATION FOR INJURIES.**RIGHT OF EMPLOYEES TO COMPENSATION.**

The so-called employee's compensation act of May 30, 1908 (35 Stat. L., 556), was amended on March 11, 1912 (Pub. No. 101; 37 Stat. L., 74), to include employees engaged in any hazardous work under the Bureau of Mines. The provisions of these acts are as follows:

EMPLOYEE'S COMPENSATION ACT.

That when, on or after August first, nineteen hundred and eight, any person employed by the United States as an artisan or laborer in any of its manufacturing establishments, arsenals, or navy yards, or in the construction of river and harbor fortification work, or in hazardous employment on construction work in the reclamation of arid lands or the management and control of the same, or in hazardous employment under the Isthmian Canal Commission, is injured in the course of such employment, such employee shall be entitled to receive for one year thereafter, unless such employee, in the opinion of the Secretary of Commerce and Labor, be sooner able to resume work, the same pay as if he continued to be employed, such payment to be made under such regulations as the Secretary of Commerce and Labor may prescribe: *Provided*, That no compensation shall be paid under this act where the injury is due to the negligence or misconduct of the employee injured, nor unless said injury shall continue for more than fifteen days. All questions of negligence or misconduct shall be determined by the Secretary of Commerce and Labor.

SEC. 2. That if any artisan or laborer so employed shall die during said year by reason of such injury received in the course of such employment, leaving a widow, or a child or children under sixteen years of age, or a dependent parent, such widow and child or children, and dependent parent shall be entitled to receive, in such portions and under such regulations as the Secretary of Commerce and Labor may prescribe, the same amount for the remainder of the said year that said artisan or laborer would be entitled to receive as pay if such employee were alive and continued to be employed: *Provided*, That if the widow shall die at any time during said year her portion of said amount shall be added to the amount to be paid to the remaining beneficiaries under the provisions of this section, if there be any.

SEC. 3. That whenever an accident occurs to any employee embraced within the terms of the first section of this act, and which results in death or a prob-

able incapacity for work, it shall be the duty of the official superior of such employee to at once report such accident and the injury resulting therefrom to the head of his bureau or independent office, and his report shall be immediately communicated through regular official channels to the Secretary of Commerce and Labor. Such report shall state, first, the time, cause, and nature of the accident and injury and the probable duration of the injury resulting therefrom; second, whether the accident arose out of or in the course of the injured person's employment; third, whether the accident was due to negligence or misconduct on the part of the employee injured; fourth, any other matters required by such rules and regulations as the Secretary of Commerce and Labor may prescribe. The head of each department or independent office shall have power, however, to charge a special official with the duty of making such reports.

SEC. 4. That in the case of any accident which shall result in death, the persons entitled to compensation under this act, or their legal representatives, shall within ninety days after such death file with the Secretary of Commerce and Labor an affidavit setting forth their relationship to the deceased and the ground of their claim for compensation under the provisions of this act. This shall be accompanied by the certificate of the attending physician setting forth the fact and cause of death, or the nonproduction of the certificate shall be satisfactorily accounted for. In the case of incapacity for work lasting more than fifteen days, the injured party desiring to take the benefit of this act shall, within a reasonable period after the expiration of such time, file with his official superior, to be forwarded through regular official channels to the Secretary of Commerce and Labor, an affidavit setting forth the grounds of his claim for compensation, to be accompanied by a certificate of the attending physician as to the cause and nature of the injury and probable duration of the incapacity, or the nonproduction of the certificate shall be satisfactorily accounted for. If the Secretary of Commerce and Labor shall find from the report and affidavit or other evidence produced by the claimant or his or her legal representatives, or from such additional investigation as the Secretary of Commerce and Labor may direct, that a claim for compensation is established under this act, the compensation to be paid shall be determined as provided under this act and approved for payment by the Secretary of Commerce and Labor.

SEC. 5. That the employee shall, whenever and as often as required by the Secretary of Commerce and Labor, at least once in six months, submit to medical examination, to be provided and paid for under the direction of the Secretary, and if such employee refuses to submit to or obstructs such examination his or her right to compensation shall be lost for the period covered by the continuance of such refusal or obstruction.

SEC. 6. That payments under this act are only to be made to the beneficiaries or their legal representatives other than assignees and shall not be subject to the claims of creditors.

SEC. 7. That the United States shall not exempt itself from liability under this act by any contract, agreement, rule, or regulation, and any such contract, agreement, rule, or regulation shall be pro tanto void.

SEC. 8. That all acts or parts of acts in conflict herewith or providing a different scale of compensation or otherwise regulating its payment are hereby repealed.

AMENDATORY ACT.

That the provisions of the act approved May thirtieth, nineteen hundred and eight, entitled "An act granting to certain employees of the United States the right to receive from it compensation for injuries sustained in the course of

their employment," shall, in addition to the classes of persons therein designated, be held to apply to any artisan, laborer, or other employee engaged in any hazardous work under the Bureau of Mines or the Forestry Service of the United States: *Provided*, That this act shall not be held to embrace any case arising prior to its passage.

It should be noted that the amendatory act is broader than the original act in that it applies to all employees engaged in hazardous work under the Bureau of Mines and not solely to persons employed as artisans or laborers.

Compensation under this act is paid from the regular appropriations of the Bureau of Mines, and not from special appropriations made for this purpose by Congress. Compensation will not be paid under this act for any period for which the employee has already received his regular salary; for example, an employee may not apply for and be granted sick leave on account of an injury and receive his salary for the period covered by such sick leave, and then apply for compensation under this act to cover the period of sick leave for which payment has already been made. In such case the employee will be required to refund the money paid under such leave before he can claim the benefits of the act.

Blank forms for reports and applications under this act may be obtained from the Washington office of the bureau upon request. All reports and applications must be submitted in triplicate and care should be exercised to see that all the information called for by the various forms is supplied. If any additional facts or information with reference to the injury exists which it is felt should be reported it is expected that the immediate official superior of the injured employee will report the same and transmit such report along with the claim and other papers in the case. All reports and claims for compensation are to be promptly submitted to the Washington office, through the immediate official superior of the injured employee, for transmission to the Secretary of Labor.

For the purpose of carrying out the provisions of this act the following regulations have been prescribed by the Secretary of Labor, to whom, by the act of March 8, 1913 (36 Stat., 736), the duty of administering the laws relating to the compensation of labor is delegated.

REPORTS TO BE MADE FOR ALL EMPLOYEES INJURED.

Whenever an injury is sustained by any Government employee due to an accident occurring in the course of his employment, and the injury is of such a nature as to prevent the employee from performing work for one day or longer, the case will be reported by the official superior of such employee on form C. A. 1 not later than the second day after the accident.

Whenever a person who has been reported disabled by an accident returns to work a report of his return to work will be made immediately on form C. A. 2 by his official superior.

Cases of death occurring either immediately or within one year after the accident will be reported on form C. A. 3 as soon as possible after knowledge of such death reaches the official superior.

PROCEDURE IN CASE OF DISABILITY.

Whenever an employee has been disabled for more than 15 days and desires to claim the benefits of this act, he must promptly fill out form C. A. 4, "Claim for compensation to injured employees," and submit the same through his official superior. This claim must be accompanied by a certificate of the attending physician as to the cause and nature of the injury and probable duration of the incapacity (or the nonproduction of the certificate must be satisfactorily accounted for), and must also be accompanied by the certificate of his official superior.

If the claim is approved by the Secretary of Labor, the compensation will be granted during disability for a period not exceeding six months.

In order to procure compensation for disability for more than six months, application must be made on form C. A. 8 for a medical examination at the end of that period by a physician provided by the Secretary of Commerce and Labor. Unless such examination is made, or if the examination discloses that the injured employee is no longer unable to resume work, the compensation payments will be discontinued at the end of the six months' period. If the injured employee's condition as disclosed by the medical examination justifies it, the disability payments will be approved and continued in the same manner as before for a total period of not exceeding one year.

In order to secure this compensation the injured employee on each pay day must file with the disbursing officer a certificate that he is still unable to resume work (form C. A. 7). This certificate must be attested by a duly qualified physician and approved by the employee's official superior.

PROCEDURE IN CASE OF DEATH.

Whenever an employee entitled to compensation under this act dies as a result of accidental injury received in the course of his employment, his wife, his children under 16 years of age, or his parent or parents, if dependent upon his earnings for support, are entitled to be paid, if they desire to claim payment under this act, the same compensation that he would have been entitled to receive had the injury not resulted in death. Such dependents are to be furnished with copies of the form for claim for compensation (C. A. 16) by the official superior of the deceased employee.

All claims for compensation in case of death must be filed within 90 days of the date of death or the right to compensation will be lost.

Each of the persons enumerated above as being entitled to share in the compensation must file a claim (form C. A. 16), accompanied by a physician's certificate of death and a certificate of the official superior of the deceased, if he, she, or they wish to claim the benefits of the act.

It is highly important to note that the claim for compensation in case of death must be filed within 90 days; that is to say, it must be filed with the Secretary of Labor within 90 days. It will not satisfy this requirement to file this claim with the official superior of the deceased employee within 90 days, but it must be submitted to the said official superior a sufficient length of time before the expiration of such 90-day period to permit of its transmission through the usual channels to the Secretary of Labor.

If the claim is approved and the compensation is payable to more than one person, the Secretary of Labor will designate the portion to be paid each claimant.

The official superior of the injured employee will make a report on form C. A. 15 whenever the payment of compensation to any person is discontinued.

By section 3 of the act of March 4, 1913 (36 Stat., 736), the duty of administering the laws relating to the compensation of injured employees is delegated to the Secretary of the Department of Labor.

OTHER REGULATIONS GOVERNING CONDUCT OF EMPLOYEES.

CLAIMS OF DEBT.

Department order of May 26, 1910, relative to claims of debt, is as follows:

Unofficial and personal business engagements with employees of this department should be entered into as with persons not in the public service.

The department will not act as a collection agent of debts of its employees. Gross or habitual turpitude in this particular will, however, be regarded as inconsistent with the qualities of character essential to honorable public service and retention therein.

Complaints based on transactions involving usury will not be considered by the department.

DESTROYING OR INJURING RECORDS, ETC.

Employees of the bureau are forbidden to destroy or to mutilate, except for official use, any books, papers, records, or documents that belong to the Government or pertain to public business. Whenever divisions, sections, or employees have such books, papers, or documents for which they have no further use, instructions regarding disposal should be asked of the director, and if after examination, it is found that the books, papers, records, or documents can not be utilized by any other division, section, or employee, and that they are no longer of use in the transaction of current business or valuable for historical or other purposes, they will be disposed of under an act of Congress that specifically provides for the disposition of useless papers.

Whoever shall willfully and unlawfully conceal, remove, mutilate, obliterate, or destroy, or attempt to conceal, remove, mutilate, obliterate, or destroy, or, with intent to conceal, remove, mutilate, obliterate, destroy, or steal, shall take and carry away any record, proceeding, map, book, paper, document, or other thing filed or deposited with any clerk or officer of any court of the United States, or in any public office, or with any judicial or public officer of the United States, shall be fined not more than two thousand dollars, or imprisoned not more than three years, or both. (Sec. 128, 35 Stat. L., p. 1111, Penal Code.)

Whoever, having the custody of any record, proceeding, map, book, document, paper, or other thing specified in the preceding section, shall willfully and un-

lawfully conceal, remove, mutilate, obliterate, falsify, or destroy any such record, proceeding, map, book, document, paper, or thing shall be fined not more than two thousand dollars, or imprisoned not more than three years, or both; and shall, moreover, forfeit his office and be forever afterward disqualified from holding any office under the Government of the United States. (Sec. 129, 35 Stat. L., p. 1112. See, also, 25 Stat., 672.)

ATTENDANCE AT COURT AND TESTIFYING AS WITNESSES.

- Employees and experts of the bureau shall in no case appear as witnesses, either before a coroner or in court, without being properly subpoenaed.

When properly served with a subpoena from either a State or a Federal court, and fees and mileage paid if required by law, all persons must obey such subpoena and be present at the time and place designated. Employment by the Government does not exempt persons from this duty, and only the party causing the witnesses to be subpoenaed can excuse them from attendance.

When an employee or expert is subpoenaed, sworn, and called to the stand to testify, he should not give any testimony without being compelled to do so by the court, but should then and there claim the privilege of exemption from testifying as a witness. On permission given he should state to the court that he has been instructed under the authority of the Secretary of the Interior of the Federal Government not to divulge, except in his written report to the head of the bureau, any matters discovered or any information gained in connection with his work or service in the inspection or examination of any mine. He should state fully the facts as to his employment by the Government as an employee or expert; that he has investigated the mine or place in controversy for the sole purpose of ascertaining its condition and of embodying the facts and conditions in a report either submitted or to be submitted by him to the Bureau of Mines, and for no other purpose and in no other capacity; and that he has not otherwise revealed or made public either the information obtained or the matters incorporated or to be incorporated in his report.

The witness should state frankly to the court that he does not intend to put himself in contempt of court, but that he claims the right of exemption from testifying for the protection of the Government service. He should state fully the conditions, if there be any such, by which he was permitted to examine the mine or place in controversy, and all the circumstances by reason of which he obtained knowledge of facts and was enabled to form scientific conclusions or opinions. He should also explain to the court that the experts and employees of this bureau are without authority in law to enter and inspect mines or mining property, that this can only

be done with the consent of the mine owner or operator, and that, if such employees and experts are required to give evidence in such cases, mine owners and operators will cease to permit them to enter their mines, and as a result the chief purpose of the Bureau of Mines will be either hampered greatly, or entirely frustrated—the purpose and aim of the bureau being to make such scientific investigations as will assist in preventing mine accidents, and not to aid private parties in enforcing claims, or to make mine owners or operators liable for the manner in which their mines have been operated.

If the court decides that the employee or expert must testify, the latter should then ask leave to consult a United States attorney, and the witness should be guided by the advice and direction tendered.

The privilege of exemption from testifying is a personal privilege and must be claimed by the witness in his own behalf. It can not be made for him by the attorneys for either of the parties in a case on trial, and it must be promptly claimed when the first question is asked and before answering any questions asked by the attorneys. The privilege is waived if the witness answers.

ACTION UNDER PROSECUTION OR WHEN ARRESTED.

If an action is brought in any local court against any employee in connection with any act under the direction or authority of the Bureau of Mines, such employee should immediately consult a United States attorney, and take no steps in the case until he has sent a full statement of the proceedings to the director. He should then await instructions from the bureau or from the Department of Justice.

If an employee or expert is arrested on any charge in connection with his services for the bureau, and the punishment decreed is a fine or imprisonment in the event of failure to pay the fine, the fine should not be paid, but bond should be given and an appeal taken.

INTEREST IN CONTRACTS OR PURCHASES.

No employee of the Government shall have any interest, directly or indirectly, in any contract made or under negotiation with the Government or with the Indians for the purchase, transportation, or delivery of supplies or goods for the Indians or for the removal of the Indians.

MISREPRESENTATION OF OFFICIAL CAPACITY.

No employee or expert shall pretend or represent himself to be an executive or peace officer of the Government at any time for any purpose.

ACCOUNTS AND DISBURSEMENTS.

APPROPRIATIONS.

Unless an appropriation has been made therefor, and unless authorization has been given by Congress and by the Secretary of the Interior, no work shall be undertaken nor indebtedness incurred.

Section 3679 of the Revised Statutes as amended (34 Stat., 49) provides that—

No executive department or other Government establishment of the United States shall expend in any one fiscal year any sum in excess of appropriations made by Congress for that fiscal year, or involve the Government in any contract or other obligation for future payment of such appropriation unless such contract or obligation is authorized by law.

* * * * *

Any person violating any provision of this section shall be summarily removed from office, and may also be punished by a fine of not less than one hundred dollars or by imprisonment for not less than one month.

PLANS AND ESTIMATES.

Plans and estimates for the work of each fiscal year must be submitted by the various section chiefs to the director at least one month before the beginning of each fiscal year.

ALLOTMENTS.

Letters of allotment authorizing the expenditure of stated amounts will be issued to division and section chiefs after the appropriations have been made by Congress and the plans have been approved by the Secretary of the Interior. Such allotments will be made to cover the salaries and other specific classes of expenditure that may be necessary to the economic operation of each division and section.

Allowances must not be exceeded under any conditions without prior authorization in writing from the director or the assistant director. To this end it is important that the officer to whom an allotment is made shall keep an accurate current account of all indebtedness incurred thereunder.

Allotments may under some conditions be made from more than one appropriation. Consequently in the preparation of requisitions and in the account kept of expenditures care must be exercised that the charge is made against the proper appropriation, and only for work specifically authorized by law under that appropriation.

VOUCHERS.

KINDS OF VOUCHERS.

Vouchers are authorized forms of accounts required for all expenditures of Government funds. Service vouchers and pay rolls

cover compensation for personal services; traveling-expense vouchers cover expenditures previously made by employees in the course of official travel; and purchase vouchers cover purchases of whatever sort when payment is to be made by a disbursing officer. Subvouchers are receipts for minor cash expenditures, which serve as a basis for the reimbursement of the employee making the expenditures and are used to supplement traveling-expense vouchers. Certain general rules as to methods of filling out vouchers apply to all these forms.

GENERAL RULES CONCERNING PREPARATION OF VOUCHERS.

The name at the head of a voucher must be literally identical with the name signed to the first certificate thereon. Exception is made only when the certificate is signed by the authorized agent of a corporation. For example, a certificate for the Western Union Telegraph Co. must be signed "Western Union Telegraph Co.," by "James Brown, operator," or by "Arthur Smith, manager," in which case the name of the company only should be written at the head of the voucher. The signature "Western Union Telegraph Co." is inadmissible. Signatures such as "John Thomas by Henry Jones" are not admissible.

When a certificate is required of a person who is unable to write his name should be affixed, he should make his mark, and some disinterested party, whose address must be given, should sign as a witness. If no other person is available, the employee making the payment may act as a witness, but he must make proper explanation of such action on the voucher.

Any items in a voucher that do not on their face appear germane to the work, or any irregularities in the form of the voucher, should be fully explained by a memorandum attached to the voucher or a notation across the face thereof. A sample of a properly prepared traveling and miscellaneous expense voucher is shown below:

Sample of traveling and miscellaneous-expense voucher.

Page 1. Name----- Date, June, 1912.

Date, 12.	Itemized statement of actual necessary expenses.	Sub- voucher No.	Amount.
June 1	Street car fare, residence to station, Pittsburgh, Pa.		\$0.05
	Transfer of baggage, residence to railway station, Pittsburgh, 1 trunk.....		.50
	Railroad fare, Pittsburgh, Pa., to Ridgway, Pa.		3.83
	Pullman, Pittsburgh, Pa., to Ridgway, Pa., lower berth.....		1.60
	Supper en route.....		.85
June 2	Pullman portage.....		.25
	Hack fare, station to hotel, Ridgway (arrived 3 a. m.).....		.60
	Lodging at Ridgway (train arrived 3 a. m.), subvoucher.....	1	.60
	Transfer self and baggage, hotel to railway station in Ridgway (1 trunk).....		1.00
	Railroad fare, Ridgway, Pa., to Emporium, Pa.78
	Parlor-car fare, Ridgway, Pa., to Emporium, Pa.86

Sample of traveling and miscellaneous-expense voucher—Continued.

Date, 12.	Itemized statement of actual necessary expenses.	Sub- voucher No.	Amount.
June 2	Porterage, parlor-car porter.....		\$0.15
	Checking, 2 pieces hand baggage, Emporium, Pa.....		.20
	Breakfast (Emporium).....		.40
	Dinner (Emporium).....		.55
	Supper (Emporium).....		.70
	Waiter fees, 3 meals.....		.30
	Lodging at Emporium, Pa.....		1.00
June 3	Breakfast, Emporium, Pa.....		.35
	Livery, Emporium to Rich Valley, Pa. (subvoucher) (including services of driver, Geo. H. White).....	2	4.00
	Subsistence of driver (dinner).....		.50
	Supper, Emporium, Pa., 60 cents; waiter fee, 10 cents.....		.70
	Telephone message from Emporium, Pa., to J. H. Miller, Ridgway, Pa., 5 minutes.....		.45
	Bath, Emporium, Pa.....		.25
	Typewriting report, hotel stenographer, 3½ hours, Emporium, Pa. (subvoucher).....	3	1.75
June 4	Services of Henry Jay, laborer, assisting with tests of blasting powder, 1 day, subvoucher.....	4	2.00
June 8	Board and lodging, Grand Hotel, Emporium, Pa., from lodging June 4 to supper June 8, inclusive, subvoucher.....	5	8.00
	Hotel porterage at Emporium, Pa. (2 pieces).....		.20
	Transfer of self and baggage (1 trunk) to station, no street cars available, Emporium, Pa.....		1.00
	Station porterage, Emporium, Pa.....		.70
	Railway fare, Emporium, Pa., to Ridgway, Pa.....		.78
	Bus hire, railway station to hotel, Ridgway, Pa.....		.15
	Lodging at Ridgway (train left at 2.20 a. m.).....		1.00
	Bus hire, hotel to railway station, Ridgway, Pa. (2 a. m.).....		.25
	Railroad fare, Ridgway, Pa., to Pittsburgh, Pa., T. R.....		1.50
	Pullman, Ridgway, Pa., to Pittsburgh, Pa., lower berth.....		.25
June 9	Pullman porterage.....		.05
	Car fare, station to residence, Pittsburgh, Pa.....		
	Total.....		36.69

TRANSPORTATION REQUESTS USED DURING PERIOD COVERED BY THIS ACCOUNT.

Date used.	No.	From—	To—	Via—	Amount.
June 9	11121	Ridgway, Pa.....	Pittsburgh, Pa.....	Pennsylvania.....	\$3.83

Employees of the Bureau of Mines will not be reimbursed for any expenditures for membership fees or dues in any society or association, nor for expenses incurred in attendance to any meeting or convention of members of any society or association, unless such fees, dues, or expenses are authorized to be paid by specific appropriations for such purposes or are provided for in express terms in some general appropriation. (37 Stat. L., 184, sec. 8.)

The printing or engraving of professional cards or other stationery for the use of employees can not be paid for from public funds.

PERSONAL SERVICES.

SALARIES AND WAGES.

Disbursements for services comprise the payment of salaries or wages, reckoned by the year, month, day, or hour. Permanent employees of the bureau receive written appointments from the Secre-

tary of the Interior, and payment must not be made for any services rendered by such employees prior to the date of such appointment.

Any change in pay status of employees in the field, such as absence from duty, termination of services, or other condition that might reduce the amount due such employee in the current pay period, should be immediately reported to the director. If necessary to stop payment, the information should be sent by telegraph.

COMPUTATION OF SALARIES AND WAGES.

Treasury Department Circular No. 35, 1914, is as follows:

The following information is given for computing annual or monthly compensation for services rendered the United States.

The act of Congress approved June 30, 1906 (34 Stat., 763), provides as follows:

"SEC. 6. Hereafter, where the compensation of any person in the service of the United States is annual or monthly the following rules for division of time and computation of pay for services rendered are hereby established:

"Annual compensation shall be divided into twelve equal installments, one of which shall be the pay for each calendar month; and in making payments for a fractional part of a month one-thirtieth of one of such installments, or of a monthly compensation, shall be the daily rate of pay. For the purpose of computing such compensation and for computing time for services rendered during a fractional part of a month in connection with annual or monthly compensation, each and every month shall be held to consist of thirty days, without regard to the actual number of days in any calendar month, thus excluding the thirty-first of any calendar month from the computation and treating February as if it actually had thirty days. Any person entering the service of the United States during a thirty-one day month and serving until the end thereof shall be entitled to pay for that month from the date of entry to the thirtieth day of said month, both days inclusive; and any person entering said service during the month of February and serving until the end thereof shall be entitled to one month's pay, less as many thirtieths thereof as there were days elapsed prior to date of entry: *Provided*, That for one day's unauthorized absence on the thirty-first day of any calendar month one day's pay shall be forfeited."

This act is construed as requiring that—

1. Each calendar month shall consist of 30 days, and the computation of salary shall be by each month separately, one-twelfth of an annual salary constituting the compensation for each month.

2. One-thirtieth of a monthly installment of salary is to be allowed for each day of service from the 1st to the 30th, inclusive. The last day of February counts as three days of service for pay purposes (two days in leap years).

3. The 31st day of a month enters into the computation of salary only where there is *one day's* absence in a nonpay status on that day—that is, absence in a nonpay status did not occur also on the 30th. For such absence on the 31st one day's pay is forfeited.

Reference is made to 20 Comp. Dec., 772 and 867.

Department circulars No. 46 of 1904 and No. 67 of 1906 are superseded.

(a) Employees paid by the day will not receive pay for Sundays unless such service is necessary and has been performed, and a statement to that effect is made on the voucher.

(b) Permanent employees paid by the day are entitled to pay for all legal holidays. In the case of per diem employees whose appointments read "when actually employed," but are of an unlimited and somewhat permanent character, payment may be made for all legal holidays when services are rendered the day before and the day after such holidays; but *temporary* per diem employees, whose appointments read "when actually employed," must perform services on all legal holidays in order to obtain payment therefor.

PER DIEM IN LIEU OF SUBSISTENCE.

Employees of the bureau when traveling under letters of authorization for field work may be allowed in lieu of subsistence a per diem amount not exceeding \$4. The term "subsistence" includes meals, lodgings, baths, and waiter fees. In addition to this per diem allowance, such field employees and field assistants may also be allowed all other necessary expenses, including those for transportation on railroads, steamboats, street cars, and other usual or necessary modes of conveyance, and for tolls, ferriage, sleeping-car and parlor-car fares, transfer of person and baggage, checking of baggage, and Pullman and station porter fees.

No per diem in lieu of subsistence will be paid during travel on a boat when the charge for transportation includes meals and berth, but reimbursement for other authorized items of subsistence not included in the charge for transportation may be claimed.

Employees in the field will be allowed subsistence for Sundays and legal holidays while on official duty and away from headquarters. But whenever employees spend their Sundays and legal holidays at home, or are away from headquarters on business of their own, they will not be entitled to subsistence for such days, and in those cases they should note on their report for the day preceding such absence the time they left their places of assignment, and on the report for the day thereafter should note the time when they resumed work. An employee whose leave of absence commences on Monday or terminates on Saturday, or is preceded or followed by a legal holiday, is not entitled to subsistence for such preceding or succeeding Sunday or holiday, unless he was actually on duty at his place of assignment, which fact must be stated below the last item of expense entered in the voucher.

Employees can not be reimbursed for expenses, nor receive a per diem in lieu of subsistence while on leave of any kind, or while detained away from duty by sickness. (8 Comp. Dec., 278.)

Field employees detailed to Washington, D. C., for purposes of consultation or in connection with the preparation of results of their field work will be allowed, in addition to their regular compensation, their actual traveling expenses in going to and returning from Washington, D. C. (Act of June 30, 1914, Public No. 161, p. 44.) Reimbursement of expenses incurred from the time of arrival until the time of departure from Washington, D. C., while acting under such a detail is prohibited by the above statute.

A field employee assigned to Washington, D. C., in the discharge of regular duties within the scope of his appointment may be reimbursed for expenses incurred in the District of Columbia when it is apparent that the employee in question was not detailed for duty within the meaning of the statute above cited. (Comp. Dec., October 13, 1914.)

VOUCHERS FOR PERSONAL SERVICES.

Four forms of vouchers are used for the payment of salaries, wages, and per diem in lieu of subsistence, as follows: For services rendered in the District of Columbia, **Form 6-48**; for services rendered outside the District of Columbia, **Form 6-47**; for services and per diem and miscellaneous expenses outside the District of Columbia, **Form 6-44**; for pay roll for personal services, **Form 1-024**.

Although all voucher forms are printed in duplicate, and are to be filled out in duplicate by the employee, the memorandum copy in each case is practically identical with the original, and the two are so arranged by perforations or folding that, through the use of carbon paper, a single writing of the account produces both the original and the memorandum copy.

A service voucher consists of a bill and a certificate that the services have been rendered and that payment has not been received. Vouchers for personal service rendered under the direct supervision of some administrative officer and so certified by him need not be certified by the payee if the voucher describes specifically the position, the rate of compensation, and the period covered.

A pay roll consists of a series of bills for services and a certificate that the services have been performed. All "Names" in the column so headed must be literally identical with those in the column headed "Signature." The column headed "Time employed" must show the dates during which service was rendered, and, for fractional parts of a month, must show the total number of days employed.

On both the aforementioned vouchers the certificate should be signed by the person under whose direction the services were performed.

Separate vouchers are required for services rendered and expenses incurred in two fiscal years. The fiscal year begins July 1 and terminates June 30.

Temporary field employees may be paid on service vouchers, pay rolls, or if necessary, subvouchers, but payment on subvouchers, from personal funds, should be made only for small jobs—the person making the payment being in a travel status—or when, owing to an emergency or unusual condition, it would be impracticable to have payment made by a disbursing agent, in which latter case an explanation must be submitted with the claim for reimbursement.

GENERAL PROVISIONS AFFECTING TRAVEL EXPENSES.

AUTHORITY REQUIRED.

All travel expenses must be either authorized in writing and approved by the director, assistant director, or by the properly delegated subordinate officer under whose supervision and direction the travel is performed.

1. *Prior authority.*—Except as provided in section 2, following, written authority for the travel shall be issued prior to the incurrence of the expense, shall specify the travel to be performed as definitely as circumstances permit, and shall be attached to the voucher for reimbursement or (if on file in the auditor's office) be referred to by number and date therein. Such written authority may also contain a provision authorizing the traveler to issue travel orders to his subordinate employees, in which case the method of reference to the general travel order shall be set forth.

2. *Approvals.*—Whenever the travel is a necessary and regular accompaniment of the office or place to which an appointment has been made, and the general classes of the expenses to be allowed are governed by law or are specified in the appointment, or whenever the expense has been incurred on account of an emergency, the approval, by the officer specified above, of the voucher for reimbursement shall be a sufficient authorization of the previously performed travel and the previously incurred expense. However, all vouchers for reimbursement on account of emergency travel without prior authorization must be accompanied by full and satisfactory explanation of the facts constituting the emergency.

HEADQUARTERS.

3. *How selected.*—The selection of official stations, when these are not fixed by law, bureau regulations, a commission of appointment, or a contract of employment, and also the assignment of temporary headquarters are matters determined by the director or assistant

director, subject to revision by the Secretary of the Interior. The director or assistant director will select official stations and assign temporary headquarters with justice and equity to employees, and in accordance with the best interests of the service.

All vouchers submitted by employees for reimbursement of traveling expenses when absent from headquarters or from a given station should contain sufficient information to enable the necessary facts regarding such absence to be determined.

ROUTE.

4. *How determined.*—All travel performed on official business must be by the shortest practicable route, unless otherwise authorized, and without any unusual or unnecessary delay. The route should be carefully arranged to avoid unnecessary duplication of travel. When diversion from the shortest practicable route is made, the extra expense must be borne by the traveler, the charges submitted for subsistence and incidental expenses being limited to those that ordinarily would have been incurred had the shortest route been traveled.

ACTUAL EXPENSES.

5. *When allowed.*—Except when otherwise provided by law, or when specially authorized by the Secretary of the Interior, as provided in section 6, following, only actual necessary expenses such as are usual and essential to the ordinary comfort of travelers, and as further defined in sections 16 to 33, inclusive, herein, will be allowed for reimbursement. (Act of Mar. 3, 1875, 18 Stat. L., 452.)

PER DIEM IN LIEU OF SUBSISTENCE.

6. *Items included.*—Whenever a per diem in lieu of subsistence has been granted by statute, or by administrative direction, it will be held to include the items mentioned in sections 23 to 25, inclusive, and no charges for any other items of subsistence will be allowed.

7. *Commencement and termination of.*—Whenever the allowance of a per diem in lieu of subsistence is dependent upon absence from headquarters or from a given station, it will be allowed for the day of departure from such place if the traveler departs before 12 o'clock noon and for the day of arrival at any such place if he arrives after 12 o'clock noon, unless otherwise directed by the head of the department, bureau, or office. Nothing in the foregoing sentence shall be construed as precluding reimbursement for actual expenses of subsistence in a case where per diem in lieu of subsistence would not be allowable thereunder.

EVIDENCE OF TRAVEL EXPENSES.

8. *Memorandum of expense.*—Every officer or other person traveling should keep a memorandum of the expenditures incurred, noting each item as soon as payment is made. The attention of travelers is invited to the statement concerning such memorandum contained in the affidavit that must be affixed to vouchers for reimbursement for traveling expenses. Memorandum books for itemizing monthly traveling expenses (**Form 1-947**) will be furnished on requisition.

RULES GOVERNING THE PREPARATION OF TRAVELING-EXPENSE VOUCHERS
AND SUBVOUCHERS.^a

9. An employee holding an appointment from the Secretary should never include in his own accounts the expenses of any other such appointee. Under no circumstances should any employee of the bureau include in his accounts for reimbursement any item of traveling or other expense for any person who is not an actual *temporary* employee of the bureau in pay status. Expenditures should be stated in chronological order and reference should be made by numbers to the subvouchers attached. All vouchers may be written in ink or with an indelible pencil or typewritten and must be signed in ink or indelible pencil. The memorandum copy, however, may be a carbon or other legible copy.

10. *The principal voucher.*—All accounts for reimbursement on account of official expenses of travel, such as (a) railroad and other fares, hotel bills, expenses incurred on behalf of assistants, purchases of supplies and expendable field material, emergency repairs, etc., incurred on field journeys; (b) services of less than a week's duration when immediate payment is necessary; and (c) all other expenses of a similar kind that may be made in emergency should be accounted for in duplicate on traveling and miscellaneous expense vouchers (**Forms 6-44** and **6-45**), and each item in excess of \$1, except schedule items for personal transportation by common carriers, meals, and taxicab fares, must be supported by a subvoucher.

The points at which items of expense are incurred must be stated in the body of the voucher, indicating definitely whether at a certain city or "en route," as the case may be. Meals should be itemized as "breakfast," "dinner," or "supper." "Dinner" in government accounting classification means the mid-day meal.

Every such voucher must show what part, if any, of the transportation was procured on transportation requests and what part, if any, was procured by use of mileage books, together with the dates and

^a See also "General Rules Concerning Preparation of Vouchers."

points of departure and destination, and the number of miles detached from the mileage book. Charges for transportation or auxiliary supplies not in accordance with published tariffs, customary rates, or usual prices must be explained. The principal voucher must be supported by subvouchers, as required in sections 13 and 15.

Only such items of miscellaneous expenditure as are obviously incidental to travel, or are procured in any emergency of such nature as to require payment from private funds in the interest of the economical transaction of public business, should be included in these vouchers.

Approval of supplemental items in a subsequent account that were not included in the account for the period during which the expenditures were incurred will be withheld until full and satisfactory explanation has been made by the employee of his failure to enter such items in the former account.

11. *Subvouchers*.—Subvouchers (**Form 6-88**) are to be used in connection with and supplemental to, main vouchers; never as principal or independent vouchers.

Under no circumstances must a subvoucher be signed before the amount in words is written in ink or indelible pencil in the receipt.

12. *Verification*.—As provided by section 8 of the act of August 24, 1912 (37 Stat. L., 417-487), affidavits to accounts may be executed before a postmaster, an assistant postmaster, a collector of United States customs, a collector of United States internal revenue; the chief clerk of any executive department or bureau, or the clerk designated by him for that purpose; the superintendent, acting superintendent, custodian, or principal clerk of any national park or other Government reservation; the superintendent, acting superintendent, or principal clerk of any Indian superintendency or Indian agency; the chief of a field party, or a notary public who is in the service of the United States. The officers named above are not permitted by law to make any charge for such service, and no jurat fee will be allowed therefor.

Affidavits executed before any other officer who has been authorized to administer oaths for general purposes and whose signature is attested by an official seal will be accepted, but no jurat fee therefor will be allowed.

False or fraudulent representations in connection with the rendition of reimbursement or other accounts, render the offender liable to a heavy fine or imprisonment under the act of Congress approved March 4, 1911 (36 Stat. L., 1355, and R. S., 5438).

13. *When subvouchers are required*.—Express and freight receipts must be furnished as subvouchers for all such charges. The weight and rate must be shown.

A recent opinion by the Attorney General rules that it is permissible under the law to send official fourth-class matter by parcels post, free of postage, under a Government penalty label, in packages not exceeding 50 pounds in the first and second zones, or 20 pounds in all other zones. Such packages must conform to parcel-post requirements in size, etc. Whenever possible, official matter of the fourth class should be thus sent instead of by express or freight. Before such articles are mailed, it should be ascertained whether their transmission is permissible under postal regulations.

Complete copies of all official telegrams or cablegrams paid for from personal funds must be furnished as subvouchers in support of such charges. Government rates only will be allowed, and the copy must show whether the message was sent at day or night rates. When the charge is more than \$1 the copy should be receipted. (See also "Detailed Instructions Relating to Telegrams," p. 47.)

Subvouchers must also be furnished for all other charges in excess of \$1, except as noted below in section 14.

14. *When subvouchers are not required.*—Subvouchers are not required for railroad or steamboat fares, sleeping-car or parlor-car fares, taxicab fares, nor for separate meals, specifically named, that are not taken in connection with lodging. The term "separate meals" must not be construed to cover board when it would be feasible and reasonable to secure a daily or weekly rate and to obtain receipts for settlements made.

Subvouchers should, however, be submitted whenever practicable when an employee is detained at one place for an extended period, when not actually en route.

Subvouchers will not be required when the taking thereof would disclose the identity of the traveler and the disclosure would be detrimental to the public interest, provided that authority for their omission has been granted by the director or assistant director.

15. *Form and contents of subvouchers.*—Subvouchers for hotel expenses must state specifically the items at the beginning and ending of the full period of service and the rate by the day or week. The "day" shall be considered as beginning with breakfast and ending with lodging. Receipted bills on the regular billheads of a hotel are accepted as subvouchers, provided they are properly made out to show the entire period and the services rendered.

Subvouchers for livery and other special transportation must describe the service hired, as "one horse and buggy," "two horses and wagon," "with driver," and state the quantity of service rendered and the rate of compensation by the day, hour, or other unit, as may have been agreed. If subsistence of driver and team is included in the cost of hire, that fact must be stated.

Examples of properly made out and properly receipted sub-vouchers (Form 6-88) are given below:

Received of John Doe this 19th day of May, 1912, the sum of twenty-one dollars and thirty-five cents (\$21.35), in full payment of the following account:

Date.	Item.	Amount.
1912.	Subsistence and lodging for John Doe:	
May 12-14.....	Dinner to supper, inclusive, 2½ days, at \$2.50.....	\$6.25
May 16-18.....	Breakfast to breakfast, inclusive, 2½ days, at \$3. (Difference in rate due to room with bath.).....	6.75
May 18.....	5 telephone calls, at 5 cents.....	.25
	Baggage from depot.....	.35
May 15.....	Horse and buggy, 1 day with driver, G. L. Brown, to visit Crescent Mine, O. B.....	4.00
May 16.....	Horse and buggy for trip to Monarch Mine, 16 miles.....	2.00
May 17.....	Saddle horse, 5 hours, to visit Hummer Mine.....	1.75
	Total.....	21.35
	Subvoucher No. 1.	

HOTEL IMPERIAL,
By H. M. JONES, Clerk, Jonesville, Ill.

Received of Henry Jones, this 21st day of June, 1912, the sum of three dollars and thirty-four cents (\$3.34), in full payment of the following account:

Date.	Item.	Amount.
1912.	Emergency supplies for Henry Jones, foreman miner:	
June 20	2 batteries for flashlight, at 35 cents.....	\$0.70
	8 yards canvas, at 15 cents.....	1.20
21	6½ pounds ¼-inch rope, at 19 cents.....	1.24
	5 pounds nails, at 4 cents.....	.20
	Total.....	3.34
	Subvoucher No. 2.	

ELLSWORTH MERCANTILE Co.,
By A. W. WHITE, Mgr., Ellsworth, Mo.

Received of R. D. Brown this 28th day of June, 1912, the sum of two dollars and seventy-five cents (\$2.75), in full payment of the following account:

Date.	Item.	Amount.
1912.		
June 28	Excess baggage on 3 packages of mine-rescue apparatus from Cloverdale, Mich., to Coalville, Mich., 100 pounds, at 2½ cents per pound.....	\$2.75
	Total.....	2.75
	Subvoucher No. 3.	

MICHIGAN CENTRAL,
By W. B. CROW, Agent, Cloverdale, Mich.

ITEMS THAT CONSTITUTE ALLOWABLE TRAVELING EXPENSES.

Items that constitute allowable traveling expenses are enumerated in sections 16 to 31, as follows:

TRANSPORTATION AND INCIDENTAL EXPENSES.

16. *Railroad and steamer fares.*—Fares on railroads, stage coaches, steamers, or for other usual modes of conveyance. But charges for

fares on steamers, or packets or for other means of water travel must show whether meals or lodging, or both, were included without increase of fare over the lowest first-class rate.

(a) Through tickets, excursion tickets, round-trip tickets, and mileage books must be purchased whenever practicable and economical.

(b) Transportation-request forms are provided for the use of travelers on official business. The use of such requests protects the traveler from any disallowance on account of an overcharge by the carrier.

The request forms are issued in books of 25 each, and may be procured upon application to the director, on requisition (**Form 6-65**) duly approved by a division chief. Only permanent employees who hold appointments by the Secretary and travel at frequent intervals will be furnished with request-form books. Employees who make only occasional journeys may be furnished with separate detached request forms. Because of the value attaching to transportation requests after they have been signed by the Secretary of the Interior and countersigned by the director, it is important that these books should be carefully safeguarded; and each employee will be held strictly responsible for every request contained in the book issued him.

The request proper is given to the agent of the transportation company in exchange for the desired ticket.

The memorandum copy should be transmitted promptly to the administrative officer under whose supervision the employee is traveling, and that officer after noting the liability incurred should initial and transmit the copy to the director.

The stub remaining in the book is retained by the employee to serve as a memorandum in making up his travel-expense account.

Transportation requests may be exchanged for railroad tickets, mileage books, sleeping-car, parlor-car, or steamer tickets, and in some instances will be accepted by stage lines. They should not be used for the payment of livery bills or meals on dining cars, nor for any expenses other than those specified. Transportation requests should not be used to pay fares amounting to less than \$2 except under unusual circumstances. If an excursion rate is effective and available, it should be asked for, and the transportation request tendered in exchange should be marked "excursion rate." Should the agent of the company refuse to accept a transportation request in exchange for an excursion-rate ticket, a cash payment for such ticket should be made. If, however, the cash payment can not conveniently be made, then a full-fare ticket may be procured by exchanging therefor a transportation request.

Should the agent of any railroad or steamship company refuse to accept a transportation request for a ticket, whether issued at full fare or at excursion rates, the fact should be reported promptly to the director.

A traveling employee must not himself attempt to procure a refund from a transportation company for the unused part of a ticket obtained in exchange for a transportation request. The unused part of such ticket must be forwarded, with a full explanation, to the director.

In filling out transportation requests, the following instructions should be observed:

All blank spaces should be filled in in ink or with an indelible pencil. When, however, there is uncertainty as to the appropriation to which the journey is to be charged, the space provided for this entry should be left blank. It is important to ascertain and enter the correct transportation charges on both the original and the memorandum copy of a request.

When tickets are issued to more than one person on one request, the full name of every person performing the travel should be entered on the back of the request as well as on the coupon.

When sleeping-car accommodations are obtained, the request must show on its face and on the coupon whether an upper or a lower berth was used.

When the journey is to be a continuous one without stop-over, only one request should be used, and a through ticket should be obtained from starting point to destination.

For all journeys on the bond-aided part of the central branch of the Union Pacific Railroad, from Atchison to Waterville, Kans. (Missouri Pacific Railroad system), the use of transportation requests is essential.

When opportunity is not afforded to obtain a ticket at the station, the transportation request may be presented to the conductor on the train.

Division chiefs will be held liable for any disallowances on transportation requests issued by them and used by their assistants.

Transportation requests must not be used for private journeys.

(c) Mileage or scrip books may be procured in exchange for transportation requests, and their use is recommended when it appears probable that they will be entirely used within the period of their validity.

Mileage or scrip books may be purchased with transportation requests in all cases where the railroad sells a straight mileage ticket that is transferable. Nontransferable mileage or scrip books must not be purchased on transportation requests, although, if employees wish to do so, they may buy such books out of their personal funds

and charge in their expense accounts the amounts of mileage used while traveling on official business. A mileage or scrip book purchased with a transportation request must not be used for private travel. When such a book is procured the fact must be immediately reported to the director. The report must give the number of the transportation request exchanged, the name of railroad issuing the book, the number of the book, the number of miles or the value of the scrip contained therein, the cost of the book, and all other information necessary to enable the bureau to keep an accurate account of the use of such book. Each mileage book will be charged to the employee in whose name it is issued. He will be held strictly accountable for its proper use and for the correctness of the number of miles or the value of the scrip detached for travel between different points. When the book has been exhausted, or when no further official travel is to be performed thereon, or when the time limit of the book is about to expire, it should be forwarded without delay to the director. An employee in possession of such a book at the time of his separation from the bureau, or upon demand of the administrative office, must settle his accountability therefor before final payment of his salary will be made.

When a mileage or scrip book is purchased with a transportation request the employee making such purchase should attach to the book, preferably on the inside of the back cover, one of the small memorandum cards (**Form 6-96**) supplied for this purpose.

Upon this card should be entered the name of the transportation company supplying the mileage or scrip book, the number of the book, and the number of the transportation request used in making the purchase. When mileage is used out of the book, entries should be made on the card showing the date of the journey, the starting point and the place of arrival, the number of miles detached, and the name or initials of the person performing the travel. After the mileage has been completely used, the card, which on its reverse side is franked and addressed for the purpose, should be immediately placed in the mails for transmission to the headquarters office.

17. *Excess baggage*.—Charges for excess baggage, when the extra weight consists of public property or of private property used for public purposes, must invariably be explained. When practicable articles which if carried on a railway ticket would constitute excess baggage should be forwarded by freight or express, and, if prior authority is procured, they may be covered by Government bill of lading. Mailable articles may be forwarded by mail under penalty label (frank).

18. *Special conveyances*.—Hire of special conveyances, such as automobile, livery, or boat, when no public or regular means of transportation is available, and also the necessary incidental ex-

penses connected therewith, such as feed and stabling of horses, subsistence of driver, ferriage, and tolls.

If charges for special conveyances include feed and stabling of horses, subsistence of driver, or any similar items, the principal voucher or subvoucher must so state. If not so stated it will be presumed that such items are not included.

19. *Transfer of self and baggage*.—Fares on street car, transfer coach, omnibus, or other vehicle and the transfer of baggage. A charge not to exceed 50 cents for either transfer coach or omnibus, or for the transfer of each piece of baggage, if within the customary rate, will be allowed. Payment in excess of this amount must be explained in writing, and street cars must be used when practicable.

20. *Checking and handling of baggage*.—Charges for checking or portorage of hand baggage at hotels and stations, not exceeding 10 cents for each piece.

21. *Steward fees and steamer chairs*.—Customary fees to stewards and others on steamers as follows: For an ocean trip, not exceeding a total at the rate of \$1 per day or fraction thereof; on coastwise steamers, not exceeding 50 cents per day; rent of steamer chair, not exceeding \$2. On ocean and coastwise steamers, where meals are not included in the cost of passage, fees to dining-room stewards and dining-room waiters must be included as a part of the maximum daily allowance for subsistence. Fees to porters and cabin or deck stewards on such vessels will be deemed expenses of transportation.

22. *Pullman fares and stateroom accommodations*.—Sleeping-car fare for one double berth, customary stateroom accommodations on steamers and other vessels, and seat in sleeping or parlor car. Such charges must specify whether for a seat or for an upper or a lower berth, and whether for standard or tourist service. Porter fees on sleeping cars must not exceed 25 cents per night. Porter fees on parlor or chair cars must not exceed 15 cents per trip.

SUBSISTENCE AND EXPENSES INCIDENT THERETO.

Except when otherwise provided by law the subsistence items as hereinafter defined in sections 23 to 25 shall not be allowed in excess of \$5 per day. The director (or assistant director) may, in his discretion, fix this expense, but not in excess of \$5 per day.

23. *Meals and lodging*.—When detention away from headquarters is incident to or necessary for the performance of the duties for which the travel is ordered, and necessary meals en route, but for no items of refreshment other than the ordinary food provided for travelers. Charges for meals must be itemized by meal in every instance.

24. *Waiter's fees*.—Fees to waiters at hotels or on dining cars or boats not exceeding 10 cents per meal or 30 cents per day.

25. *Baths.*—Charges for baths, not exceeding 25 cents each, while absent from designated headquarters.

MISCELLANEOUS EXPENSES.

26. *Telegraph service.*—Telegrams and cablegrams on official business at Government rates. Charges therefor must be accompanied by copies of the messages marked to show whether sent at day or night rate, and, unless prepaid, must state that they are chargeable to the Bureau of Mines. Night service should be employed when practicable.

27. *Telephone service.*—Reasonable charges for the use of telephones on official business. Charges for long-distance calls should show with whom communication was held, and the points between which service was rendered. Receipts should be submitted for items in excess of \$1.

Section 7 of the legislative, executive, and judicial appropriation act, approved August 23, 1912 (37 Stat., 414), provides that—

No money appropriated by this or any other act shall be expended for telephone service installed in any private residence or private apartment or for tolls or other charges for telephone service from private residences or private apartments, except for long-distance telephone tolls required strictly for the public business, and so shown by vouchers duly sworn to and approved by the head of the department, division, bureau, or office in which the official using such telephone or incurring the expense of such tolls shall be employed.

The Comptroller of the Treasury, in an opinion dated November 27, 1912, and addressed to the Secretary of the Interior, citing his decision to the Secretary of Agriculture, dated November 12, 1912, held that it is the apparent intent of Congress by this law “not to cast the charge of public telephoning on the officer who sends or receives a message on public business, but to put it out of his power to charge the Government with the cost of his private messages.” The comptroller further stated that “where the Government has provided telephones the effect of the law is not to permit charges on other telephones to be paid.”

28. *Personal services.*—The occasional and temporary service of necessary assistants, when such service is necessary. When any such person not holding a secretary's appointment is employed, the official traveler may also pay for such person's transportation, subsistence, and lodging, taking subvouchers for such payments in accordance with sections 13, 14, and 15. Where practicable, payments for personal services should be made direct to employee by a disbursing officer on certified vouchers.

29. *Stenographic or typewriter service.*—Charges for stenographic or typewriter service when provided by law or specially authorized or approved.

30. *Incidental expenditures.*—Charges for miscellaneous items of expense peculiar to the exigencies of the work on which the employee is engaged. Charges not allowed by these regulations must be especially authorized or approved by the director or assistant director.

31. *Emergency expenditures.*—Emergency expenditures not enumerated in any of the foregoing classes, such as the payment of extra fare on limited trains when delay would injuriously affect the public interests, or the use of an extra room at a hotel, when necessary for the proper transaction of official business. When such a charge is made the nature of the emergency must be clearly set forth in writing, and the expenditure must be subject to the approval of the director or assistant director.

32. *Field-party expenses.*—Officials in charge of field parties may, when duly authorized by the director, hire horses and employ drivers, laborers, cooks, and other temporary minor assistants for service in the field. When necessary they may also purchase outfits and subsistence supplies, subvouchers to be taken therefor in accordance with sections 13 to 15, inclusive. Subvouchers for subsistence supplies for field use must show the number of persons composing the field party for the use of which the supplies were purchased. Such expenditures out of personal funds must be limited to those obligations that it is impracticable to have paid directly by a disbursing officer.

DETAILED INSTRUCTIONS RELATING TO TELEGRAMS.

The telegraph must not be used unless the delay occasioned by the use of the mail would be injurious to the public interest. As stated in section 26 preceding, night messages must be employed when practicable. Whenever telephone service is cheaper than telegraph service and equally effective the telephone should be used.

Telegrams should be as brief as possible. In messages from one official to another, initials should be used only so far as is necessary for identification. Numbers should be expressed in words and not in figures. The official telegram form (**Form 6-55**) and book of forms (**Form 6-56**), obtainable on requisition, must be used whenever practicable. When such official forms are not at hand and the telegraph company form is used instead, the message should be indorsed "Official business, Bureau of Mines," in order both to obtain the Government rate thereon, and to inform the company of the priority in transmission to which all Government messages are entitled.

Only telegrams relating solely to official business may be sent at the expense of the Government. Telegrams for the personal benefit

of individuals, such as those making inquiry concerning leaves of absence, the forwarding of personal mail, or the nonreceipt of salary or expense checks, should not be charged to the Government. When so charged they will be disallowed.

Charges for telegrams sent from or to Washington, D. C., must not be paid by the person sending or receiving the messages, except in the event that payment is demanded as a condition precedent to the transmission or delivery of the message. Such messages should have the words "Charge Bureau of Mines" written or stamped thereon, and the telegraph agent, operator, or messenger should be directed to have the message included in the telegraph company's monthly bill against the bureau.

Identification cards, which are issued by the telegraph companies and entitle the holder to send messages that will be charged in the company's monthly bill against the bureau, may be obtained through the headquarters office of the bureau.

In a prepaid message the following words will be counted and charged for: The address, the body of the message, and the signature; all words in an extra date; and in the check heading the words "Deliver and report charged," "Collect delivery charges," "Report delivery," and "Repeat back."

In collect messages the word "Collect" in the check heading will be counted, but will not be charged for.

When a message bears two or more addresses and delivery is to be made to each address, it will be charged as two or more messages, as the case may be.

To prevent unnecessary telegraphing between the headquarter's office and other offices of the bureau, the following instructions should be observed:

When telegraphing to the Washington office, advising it of a mine disaster, or concerning any other matter that should, in the judgment of the sender, be also communicated to the Pittsburgh, Denver, or San Francisco office, there should be added to the message to the Washington office the words, "Pittsburgh (or Denver, or San Francisco) notified;" and in the message to such other office the words "Washington notified" should be added.

Should instructions from either office be desired, the request for instructions should be omitted from the message to the office not directly concerned.

In sending telegrams to the offices of the Bureau of Mines the following forms of telegraphic address should be employed:

Bureau Mines, Washington, D. C.

Bureau Mines, Pittsburgh, Pa.

U. S. Bureau Mines, Foster Building, Denver, Colo.

U. S. Bureau Mines, Customs Building, San Francisco, Cal.

In counting the words of a message, dictionary words, initial letters, surnames of persons, names of cities, towns, villages, States, or Territories, or names of the Canadian Provinces will be counted and charged each as one word. The abbreviations for the names of cities, towns, villages, States, Territories, and Provinces will be counted and charged as if written in full. In names of countries or counties all the words will be counted and charged.

Abbreviations of weights and measures in common use will be counted each as one word.

Figures, decimal points, and bars of divisions, and letters (except the pronounceable groups covered by the following paragraph) will be counted each separately as one word.

All pronounceable groups of letters, when such groups are not dictionary words or combinations of dictionary words, will be counted at the rate of ten letters or fraction of ten letters to a word. When such groups are made up of combination of dictionary words, each dictionary word so used will be counted as one word.

The following examples will illustrate the application of these rules:

	Words.		Words.
Van Brunt-----	1	Twenty million-----	2
McElwee-----	1	2d (or 2nd)-----	2
O'Brien-----	1	Lbs-----	1
Smith, jr-----	2	Amaurecis-----	1
New Jersey (or N. J.)-----	1	Interovis-----	1
New York State-----	2	Bjxtram 90-----	8
Nova Scotia (or N. S.)-----	1	All right-----	2
St. Helena-----	1		
West St. Helena-----	1	EXCEPTIONS.	
Queen Anne County-----	3	A. M-----	1
District of Columbia (or D. C.)--	1	P. M-----	1
North America-----	2	F. O. B. (fob)-----	1
21.34-----	5	C. O. D. (cod)-----	1
63½-----	5	C. I. F. or C. F. I. (or cif)-----	1
33C527-----	6	O. K-----	1
No. 248 24th St.-----	8	C. A. F. (caf)-----	1
20 000 000-----	8	Per cent-----	1

The rates for transmission of official messages over the principal telegraph lines of the United States are fixed annually by the Postmaster General, and *all payments in excess of those rates will be at the expense of the persons making the payments.* The rates now (January, 1915) in force are indicated below.

GOVERNMENT DAY-MESSAGE RATES.

For any distance not exceeding 1,000 miles the Government rate for a day message is 20 cents for 20 words or less, address and signature counted, and 1 cent for each word over 20. For distances greater

than 1,000 miles, the rate is one fourth of a cent additional for each additional 500 miles or fraction thereof. In no case should the amount charged exceed 40 cents for 20 words, or 2 cents for each word over 20.

GOVERNMENT NIGHT-MESSAGE RATES.

For any distance not exceeding 2,000 miles the Government rate for a night message is 15 cents for 20 words or less, address and signature counted, and 1 cent for each word over 20. For distances greater than 2,000 miles the rate is 25 cents for 20 words, address and signature counted, and 1 cent for each word over 20.

NIGHT LETTERS.

There is no Government night-letter or day-letter rate; but when the night-letter rate is cheaper than the Government night rate the Government receives the cheaper service and such messages are sent at night-letter rate instead of Government rate (see comparative table).

COMPARATIVE COST OF MESSAGES BETWEEN DIFFERENT POINTS.

The comparative costs of transmitting messages between Washington and the principal cities of the United States by the different rates are tabulated below:

Comparative costs of sending messages from Washington to cities in different parts of the United States.^a

City.	Distance (miles).	Messages of 20 words or less.		Letters of 50 words or less.	Night messages of 80 words.	
		Government day rate.	Government night rate.	Night-letter rate.	Government night rate.	Night-letter rate.
Baltimore.....	1,000 or less.....	\$0.20	\$0.15	\$0.25	\$0.75	b \$0.40
Philadelphia.....	do.....	.20	.15	.25	.75	b .40
Pittsburgh.....	do.....	.20	.15	.35	.75	b .56
Wilkes-Barre.....	do.....	.20	.15	.30	.75	b .48
New York.....	do.....	.20	.15	.30	.75	b .48
Boston.....	do.....	.20	.15	.40	.75	b .64
Chicago.....	do.....	.20	.15	.50	.75	.80
Urbana, Ill.....	do.....	.20	.15	.50	.75	.80
Evansville, Ind.....	do.....	.20	.15	.50	.75	.80
Ironwood, Mich.....	do.....	.20	.15	.50	.75	.80
Huntington, W. Va.....	do.....	.20	.15	.40	.75	b .64
Knoxville, Tenn.....	do.....	.20	.15	.50	.75	.80
Birmingham, Ala.....	do.....	.20	.15	.40	.75	.96
New Orleans.....	1,500 or less.....	.25	.15	.50	.75	.80
McAlester, Okla.....	do.....	.25	.15	.75	.75	1.20
St. Louis.....	do.....	.25	.15	.50	.75	.80
Omaha.....	do.....	.25	.15	.60	.75	.96
Denver.....	2,000 or less.....	.30	.15	.75	.75	1.20
Rock Springs, Wyo.....	do.....	.30	.25	.75	.75	1.20
Salt Lake City.....	More than 2,000.....	.35	.25	.75	.85	1.20
Billings, Mont.....	do.....	.35	.25	.75	.85	1.20
San Francisco.....	3,000 or more.....	.40	.25	1.00	.85	1.60
Seattle.....	do.....	.40	.25	1.00	.85	1.60

^a Cost to or from other points may easily be determined from the table and preceding statement of Government rates.

^b Would be sent at night-letter rate.

CABLE MESSAGES.

On account of the high cost of cabling, senders should endeavor to make their messages as brief as is consistent with clearness. Whenever possible, code words should be used. When there is doubt as to any particular point, the telegraph companies should be consulted.

FREIGHT.

PREPARATION FOR SHIPMENT.

(1) Articles should be prepared for shipment in such a way that the lowest available rate may be obtained. However, if the character and value of the supplies justify the payment of a higher rate in return for the greater protection afforded them while in transit, they may be packed accordingly.

(2) So far as practicable, articles different in kind, unless they take the same rating, and unless such shipment does not increase the cost, should not be shipped in the same package. Attention is called to the fact that when two or more articles, each of which takes a different classification or rating, are shipped in the same package, the entire package will be charged for by the carrier at the highest classification or rating applicable to any part of its contents.

(3) Articles should be shipped "K. D." (knocked down; that is, taken apart and shipped flat or in compact form) whenever practicable, as they are entitled to lower rates in that form than when shipped "S. U." (set up). In this connection reference should be had to the regular classification sheets of the railroad companies, exceptions thereto, and tariffs, which are on file with the railroad freight agents. In making large shipments advantage should be taken of carload rates whenever the interest of the Government is served thereby.

(4) In preparing freight for shipment care should be taken to see that, when practicable, no single package exceeds in gross weight the number of pounds that can be conveniently handled by the carriers, including draymen and freighters.

(5) Unless for some essential reason it should be necessary to make such a shipment, a package of very light weight should not be shipped alone on a bill of lading.

(6) Each package, bundle, or shipment of less than a carload lot must be plainly marked, so as to show definitely the consignee and the destination, in order to insure proper delivery, even if separated from the carrier's waybill. Labels and tags are provided for this purpose.

(7) All consignments must be weighed before being shipped, and the gross weights must be stated on the bill of lading.

SHIPPING ORDERS.

(8) A shipping order, to be signed by the consignor and corresponding with the bill of lading, except that the certificates of the consignor and the consignee are omitted, is provided with the bill of lading to be furnished the initial carrier, to enable such carrier to bill the freight properly.

On April 2, 1914, an agreement was entered into with all express companies party to the official express classification that outward shipments of cylinders containing compressed oxygen gas for use in mine-rescue work will be carried at one-half first-class rates, and that the empty cylinders will be returned to the plant free of charge. In consequence of this agreement all oxygen and empty tanks should be shipped by express instead of freight. The following companies are included in this agreement:

Adams Express Co., American Express Co., Great Northern Express Co., National Express Co., Northern Express Co., Southern Express Co., Wells, Fargo & Co. Express, Western Express Co., and the Globe Express Co.

Shipments should be made on Government bills of lading, which will be properly accomplished and surrendered to the express agent at destination.

Government bills of lading with the legend "Empty oxygen cylinders, free of charge," will also be used for making shipment of empty tanks.

BILLS OF LADING.

(9) Shipment by rail of all freight on which the Government is to pay the transportation charges should be made on the Government bill of lading (Form 6-57). The function of a Government bill of lading is to avoid prepayment of charges by the shipper and to insure the regular tariff rates and proper deductions therefrom when the shipment is made in whole or in part over a land-grant or bond-aided road.

(10) Shippers and disbursing officers of the bureau are cautioned not to make any payments to land-grant or bond-aided roads, either before or after the completion of the transportation service.

(11) Shippers will be held responsible for excess charges resulting from failure to use a Government bill of lading.

(12) Shipments by water may be made on the bill of lading customarily used by the transportation company, or on the regular Government bill of lading, with an additional clause inserted showing that the usual conditions of the marine bill of lading shall apply.

(13) If the regular rates of the carrier by water do not include marine insurance, no such insurance can be legally paid by the Government unless specific appropriation has been made therefor.

(14) In general, the printed instructions on the reverse of the prescribed form (Form 6-57) should be carefully observed. If a bill of lading is issued to cover a shipment from one point to another, not its final destination, or if a shipment must be forwarded to a new destination, the bill should be accomplished and surrendered at the original destination and a new bill of lading issued to cover the additional distance.

(15) Bills of lading for shipments to the Washington office should be promptly mailed to the Bureau of Mines, Washington, D. C.

(16) Packages shipped to Washington, D. C., should be addressed, "Bureau of Mines, Washington, D. C."

(17) Packages for any other destination than Washington, D. C., should be addressed to the Bureau of Mines, with the name of the person for whom the package is intended marked on the outside thereof, as per sample below:

BUREAU OF MINES,
40TH AND BUTLER STS.,
PITTSBURGH, PA.

For Mr. C. D. Smith.

(18) For shipments originating on the Great Northern Railway Co.'s line destined to points on a connecting river steamboat line, two bills of lading should be issued, one covering the haul by rail and the other covering the haul by water. Both bills should be forwarded to the agent of the railroad company at the transfer point. He will accomplish the bill for the shipment from the point of origin to the point where the shipment leaves the railroad for the boat, procure the signature of the water carrier's agent to the second bill of lading, and forward it to the consignee. For shipments originating at river points and destined to points on the Great Northern Railway the reverse procedure should be followed.

(19) When shipments by freight or express start at a railway point and terminate at a stage point, the consignor, to facilitate the accounting, may indorse the bill of lading, "All charges on this bill of lading payable to initial carrier." The initial carrier will then pay the necessary advance charges to the final carrier or carriers and mark the shipment "Prepaid." The consignee will accomplish the bill of lading at destination and forward it to the agent of the initial carrier at the transfer point. The initial carrier will then collect the total amount from the Treasury Department in the usual manner.

(20) Routing is to be shown on the bill of lading only when some substantial interest of the Government is subserved thereby.

(21) Shipments of domestic live stock should be made under the railroad's "uniform live-stock contract," a copy of which should be attached to the bill of lading.

(22) When articles are purchased by a member of the bureau, to be delivered by the vendor for transportation at the expense of the Government, the purchaser shall prepare, so far as he can with the information at hand, a bill of lading, memorandum bill of lading, and shipping order, and forward them to the vendor, who will complete them as the representative of the consignor, have them executed by the agent of the initial carrier, and dispose of them as directed by the purchasing officer.

(23) When such method of shipping is deemed more practicable, Government supplies, properly prepared for transportation, may be turned over to the Quartermaster's Department of the United States Army for shipment; this department will arrange for the issuance of the bill of lading and its transmission to the consignee, etc. (23 Stat., 111.)

(24) Charges may be prepaid by the dealer on freight shipments when no part of the route is over any land-grant or bond-aided road, and on shipments by express or in any other way, *if prepayment is necessary to insure delivery to the consignee*. In such cases the dealer's invoice should show the *purchase price* and the *transportation charges*, with the *carrier's receipt attached in support of the transportation charges*.

(25) When a consignment is ready for delivery to the initial carrier, the shipping order, the bill of lading, and the memorandum bill of lading, if used, must be delivered to the carrier's agent, who will retain the shipping order, and, after receipting the bill of lading and memorandum copy, return them to the consignor. The consignor must then promptly forward the bill of lading direct to the consignee and dispose of the memorandum copy in accordance with the instructions on the reverse side thereof, or in accordance with such special instructions as he may have received.

(26) If the consignee has the bill of lading in his possession and is notified of the arrival of the goods shipped thereon, he should procure the release of the goods to himself, or his representative, by accomplishing the bill and delivering it to the carrier.

(27) If, through mistake or lack of information on the part of the shipper, the goods have been shipped on a commercial bill, the consignee may execute a regular Government bill of lading so far as practicable (a forced bill), attach it to the commercial bill, and deliver both bills to the carrier in exchange for the goods.

(28) When a consignee receives freight from a delivering line, he should examine the shipment before receipting for it. If it is not complete and in apparent good order, any shortage or damage found should be noted in the proper place on the bill of lading over the signature of the consignor and, if practicable, over that of the local freight agent; otherwise a clear receipt should be given to the last

carrier by the consignee in his certificate, and the bill of lading should be surrendered to the delivering line.

(29) All Government bills of lading are forwarded to the Treasury Department for settlement. For emergency shipments, or when Government bills of lading are not used, subvouchers or regular freight receipts, accompanied by explanatory statements, must be taken for the freight charges, and such charges will be paid in the usual way by the disbursing officers of the bureau, subject to disallowances for any overcharges or for shipments over land-grant roads.

(30) The transportation companies will be charged with the value of such supplies as may have been lost or damaged in transit, in accordance with the consignee's report on the bill of lading. No deduction should be made for a reasonable amount of shrinkage resulting from causes beyond the control of the carrier.

STORAGE AND DEMURRAGE.

(31) Storage charges on Government supplies are proper when less than carload shipments are left in the possession of the carrier for a longer period than the free time allowance, after due notice of their arrival has been given.

(32) The transportation companies will load and unload freight when less than a carload, but will require the consignor and the consignee, respectively, to load and unload carload freight. The companies reserve the right, however, to load and unload carload freight after the free time for loading or unloading has expired, and for this service will assess their regular published loading or unloading charges.

(33) Storage and demurrage charges are reckoned from the date when the notice of arrival of the freight is sent to the consignee, not from the date when the notice is received by him. They cease on the date when the supplies are removed or the car is released. Charges are made for this period, less the free time allowance and all Sundays and legal holidays.

(34) Storage and demurrage charges will be paid by the proper officer on receipt of a voucher in correct form, which shows the date the supplies were received and stored, or the car placed, and the date the supplies were removed from storage or the car released. This information should be indorsed on the bill of lading and be properly authenticated by the consignee, or by the consignor when demurrage accrues during the process of loading. Such charges may properly be included in the transportation charges, but must be separately itemized.

(35) When a consignee is notified by the transportation company that freight is at its destination he should procure its release and

removal without unnecessary delay, in order to avoid the assessment of storage and demurrage charges.

LAND-GRANT AND BOND-AIDED RAILROADS.

(36) The land-grant and bond-aided railroads in the United States are listed in the following table:

Land-grant and bond-aided railroads of the United States.

Name of road.	From—	To—	Miles.	Remarks.
Alabama Great South- ern.	Wauhatohie, Tenn....	Meridian, Miss.....	289.00	50 per cent land grant.
Atchison, Topeka & Santa Fe.	Atchison, Kans.....	Stateline, Kansas and Colorado.	470.58	Do.
Atchison, Topeka & Santa Fe—Southern Kansas division.	Lawrence, Kans.....	South boundary of Kansas, near Coffey- ville.	142.80	Do.
Atchison, Topeka & Santa Fe—coast lines.	Isleta, N. Mex.....	Mojave, Cal.....	805.80	Do.
Central of Georgia.....	Girard, Ala.....	Troy, Ala.....	84.00	Do.
Central Pacific.....	Ogden, Utah.....	Sacramento, Cal.....	742.61	Bonded.
Do.....	Brighton, Cal.....	Niles, Cal.....	103.83	Do.
Do.....	Niles, Cal.....	San Jose, Cal.....	17.54	Do.
Chicago, Burlington & Quincy.	Burlington, Iowa.....	Missouri River, via Pacific Junction, to East Plattsmouth, Iowa.	279.98	50 per cent land grant.
Do.....	Hannibal, Mo.....	St. Joseph, Mo.....	206.40	Do.
Chicago, Milwaukee & St. Paul.	St. Paul, via Mendota or St. Paul Junction, Faribault, and Aus- tin.	Lyle, Minn.....	112.00	Do.
Do.....	Minneapolis, Minn., via same route.do.....	118.00	Do.
Do.....	Calmar, Iowa.....	Sheldon, Iowa, junc- tion with Chicago, St. Paul, Minneap- olis, & Omaha— St. Paul & Sioux City division.	211.00	Do.
Do.....	Madison, Wis.....	Portage, Wis.....	39.00	Do.
Do.....	Hastings, Minn.....	Ortonville, west boundary of State.	202.10	Free land grant.
Do.....	Dubuque, south.....	Tete des Morts Creek, on west bank Missis- sippi River.	10.78	50 per cent land grant.
Do.....	Mississippi River, Le Crescent, opposite Le Crosse, Wis.	Houston, Minn.....	18.00	Do.
Do.....	Houston, Minn.....	Airlie, on western boundary of State of Minnesota.	279.37	Free land grant.
Chicago & North West- ern.	Cedar Rapids, Iowa...	Transfer grounds, or Council Bluffs, Iowa.	271.60	50 per cent land grant.
Do.....	Branch-Lyons, Iowa..	Clinton, Iowa.....	2.60	Do.
Do.....	Winona, Minn.....	0.6 mile west of Water- town station.	323.22	Do.
Do.....	Fond du Lac, Wis....	Junction with Duluth, South Shore & At- lantic, 12.1 miles west of Marquette.	241.20	Do.
Do.....	Souix City, Iowa.....	Fremont, Nebr.....	76.00	Bonded.
Do.....	California Jc., Iowa..	Missouri Valley, Ia....	6.00	Do.
Chicago, Rock Island & Pacific.	Davenport Iowa.....	Transfer grounds, or Council Bluffs, Iowa.	317.75	50 per cent land grant.
Do.....	Mississippi River, op- posite Memphis, Tenn.	Argenta, opposite Little Rock, Ark.	131.00	Free land grant.
Chicago, St. Paul, Min- neapolis & Omaha.	123 miles south of Warrens, Wis.	St. Paul, Minn.....	172.60	50 per cent land grant.
Do.....	Stillwater Junction....	Stillwater, Minn.....	3.50	Do.
Do.....	St. Paul, via Le Mars, Iowa.	Sioux City, Iowa.....	269.60	Do.
Do.....	Hudson, Wis.....	Superior, Wis.....	149.50	Do.
Do.....	Superior Junction, Wis.	Bayfield, Wis.....	94.40	Do.
Duluth, South Shore & Atlantic.	Marquette, Mich.....	L'Anse, Mich.....	63.00	Do.

Land-grant and bond-aided railroads of the United States—Continued.

Name of road.	From—	To—	Miles.	Remarks.
Grand Rapids & Indiana.	Indiana-Michigan State line.	Petoskey, on Traverse Bay, Mich.	278.00	50 per cent land grant.
Great Northern.	St. Paul, Minn.	Breckenridge, Minn.	216.84	Do.
Do.	St. Paul, Minn., via St. Cloud and Barnesville, Minn.	St. Vincent, Minn.	390.25	Do.
Do.	East St. Cloud, Minn.	Sank Rapids, Minn.	2.19	Do.
Illinois Central.	Calro, Ill.	Chicago, Ill.	365.00	Do.
Do.	Centralia, Ill.	East Dubuque, Ill.	342.73	Do.
Do.	Dubuque, Iowa.	Sioux City, Iowa.	326.58	Do.
Lake Shore & Michigan Southern.	Jonesville, Mich.	Lansing, Mich.	60.00	Free land grant.
Louisville & Nashville.	Decatur, Ala.	Flomaton, Ala.	302.00	50 per cent land grant.
Do.	Flomaton, Ala.	Pensacola, Fla.	44.00	Do.
Do.	Pensacola, Fla.	River Junction, west bank Apalachicola River.	161.00	Do.
Michigan Central.	Lansing, Mich.	Mackinaw City, Mich.	259.00	Free land grant.
Missouri Pacific.	St. Louis, Mo.	Pacific, Mo.	37.00	50 per cent land grant.
Missouri Pacific—Central branch.	Atchison, Kans.	Waterville, Kans.	100.00	Bonded.
Missouri Pacific—St. Louis, Iron Mountain & Southern.	Birds Point, opposite Calro, via Poplar Bluff and Little Rock.	Texarkana, Ark.	394.50	Free land grant.
Do.	Argenta, Ark.	Fort Smith, Ark.	165.16	Do.
Missouri, Kansas & Texas.	Junction City, Kans.	Humboldt, Kans.	125.77	Do.
Mobile & Ohio.	Mobile, Ala.	Mississippi-Tennessee State line.	333.28	50 per cent land grant.
Northern Pacific.	Ashland, Wis.	Portland, Oreg.	1,980.00	Do.
Do.	Wallula Junction, Wash.	Pasco Junction, Wash.	16.00	Do.
Do.	Watab, Minn.	Brainerd, Minn.	54.84	Do.
Do.	St. Paul, Minn.	Duluth, Minn.	154.42	Do.
Do.	White Bear Lake, Minn.	Stillwater, Minn.	12.00	Do.
Pere Marquette.	Flint, Mich.	Ludington, Mich.	170.66	Do.
Seaboard Air Line.	Fernandina, Fla.	Tampa, Fla.	241.00	Do.
Do.	Waldo, Fla.	Cedar Keys, Fla.	71.00	Do.
Do.	Jacksonville, Fla.	Chattahoochee, Fla.	209.00	Do.
Southern Pacific.	Alcalde, via Huron, Goshen, Tulare, Mchave, and Los Angeles.	Colorado River, opposite Yuma, Ariz.	551.34	Do.
Southern Pacific—San Francisco & Portland line.	Roseville Junction, Cal.	Portland, Oreg.	664.00	Free land grant.
Southern Pacific.	San Jose, Cal.	Tres Pinos, Cal.	50.26	50 per cent land grant.
Southern.	Selma, Ala.	Jacksonville, Ala.	145.00	Do.
St. Louis & San Francisco.	Pacific, Mo.	Seneca, Mo.	291.30	Do.
Vicksburg, Shreveport & Pacific.	Jackson, Miss.	Meridian, Miss.	96.00	Do.
Do.	Delta, La.	Waskom, Tex.	191.00	Do.
Wisconsin Central.	Portage City, via Stevens Point, Wis.	Ashland, Wis.	256.00	Do.

EXPRESS.**USE.**

Shipments shall be made by express, rather than by freight, whenever such method of shipment best serves the interests of the Government.

BILLS OF LADING.

With the exceptions and modifications stated below, the rules referring to freight shipments apply also to shipments by express.

(a) No land grant or bond aid has been extended to any express company; consequently all provisions relating to land-grant or bond-aided railroads are inapplicable to express companies.

(b) When a shipment consists of more than one piece the exact weight of each piece should be given on the bill of lading, for in collective shipments each piece weighing less than 20 pounds is charged for as weighing 20 pounds.

(c) When instruments are shipped by express they should be packed in an outer box or case. If shipped in the original box or case, three times the ordinary express rate will be charged by the carrier.

(d) A temporary receipt may be given to the carrier in exchange for the goods, such receipt to be held until the bill of lading can be regularly accomplished and delivered to the carrier.

(e) A single package must not be given a valuation in excess of \$50.

If express agents decline to accept Government bills of lading, their attention should be called to the instructions from the companies' general offices, as indicated below:

Adams: Official Gazette, November 15, 1906.

American: Tariff circular 109, supplemented May 1, 1908.

Globe: Instructions on Government bills of lading.

Great Northern: General circular 83, paragraph J.

National: Same as American.

Pacific: Same as Globe.

Southern: Tariff circular B 27, paragraph 5, April 10, 1908.

Wells Fargo: Tariff circular B 27, April 10, 1908.

PARCEL POST.

Whenever articles or packages can be forwarded advantageously by parcel post, that method of shipment should be adopted, the department frank being used in lieu of postage. (See sec. 13, p. 40.)

PURCHASES.

AUTHORITY.

All purchases are made under the law (Rev. Stat., sec. 3709) as follows:

All purchases and contracts for supplies or services in any of the departments of the Government, except for personal services, shall be made by advertising a sufficient time previously for proposals respecting the same, when the public exigencies do not require the immediate delivery of the articles or performances of the service. When immediate delivery or performance is required by the public exigency, the articles or service required may be procured by open purchase or contract, at the places and in the manner in which such articles are usually bought and sold, or such services engaged, between individuals.

PURCHASES IN WASHINGTON.

Purchases in Washington are made by the purchasing agent of the bureau on requisitions by individual employees that have re-

ceived the approval of the proper administrative officer. In making these purchases prior consideration is given to existing contracts which are made annually for such articles as are repeatedly required.

PURCHASES IN THE FIELD.

Field purchases are made direct, at or near the place where delivery is required. In conformity with section 3709 of the Revised Statutes, proposals are sent to dealers, and on receipt of replies the best offer is accepted, and this proposal is filed with the voucher when transmitted for payment. If it is impossible or impracticable to obtain formal proposals, adequate reasons for the purchase without advertising should be given, as in the manner indicated on the voucher form.

ADVERTISING.

Advertising is necessary before expense may be incurred to procure any article or any nonpersonal service, except when the public exigencies require the immediate delivery of the article or performance of the service; but the following provision of law (sec. 3828, Rev. Stat.) should be noted:

No advertisement, notice, or proposal for any executive department of the Government, or for any bureau thereof, or for any office therewith connected shall be published in any newspaper whatever except in pursuance of a written authority for such publication from the head of such department; and no bill for any such advertising or publication shall be paid unless there be presented with such bill a copy of such written authority.

The written authorization by the Secretary to a subordinate official directing him in general terms to place advertisements as may be required is a substantial compliance with the requirements of the above statute, but the subordinate official should, in turn, place the advertising so authorized by written orders directed to the particular newspapers selected by him as a medium for such advertising, and copy of his specific order should be attached to bills rendered by the newspaper for advertising service. (19 Comp. Dec., 628.)

Advertising may be accomplished by distributing circulars or handbills, by posting notices, by sending letters or telegrams to possible bidders, or if there is not time for any of these methods, by personal inquiry and by telephone. The method or methods to be followed should be determined by considering the importance and value of the proposed purchase or contract, the location of probable bidders, and the time that will be required to advertise and to receive proposals.

The duration of the time of advertising is not fixed. It should be long enough to allow possible bidders to consider fully the specifications and the matter of their ability to perform the contract if it should be awarded to them.

The advertisement should contain full information on the following matters or show where such information can be procured: Specifications in detail as to the articles to be furnished or the work to be done; the place at which delivery or performance is required; the period within which proposals will be received; if bidders are invited to be present, the time when the bids will be opened and considered; and the address to which proposals should be sent.

VOUCHERS FOR PURCHASES.

The vouchers and the subvouchers for purchases and services other than personal (**Forms 6-51, 6-52, and 6-53**) are used for purchases and miscellaneous expenditures, including rent, storage, freight, expressage, services by the day or job on contract work, and telegraph or telephone charges. When any of the above obligations are settled by cash payments, subvouchers should be taken and the returns made on the traveling and miscellaneous expense voucher. (See, also, sec. 32, p. 47.)

Each item or purchase must show the date of purchase, the number of units, the kind of unit, and the price or rate per unit, as well as the total cost. If a piece of work is done as a job, statement to that effect is sufficient.

- The purchase or hire of property belonging to employees is prohibited; but a man may be hired as an employee in connection with his horses, wagons, or other property, the whole being covered under one agreement and accounted for by a single voucher. When the material hired is merely accessory to the service of the employee, as when an artisan is hired with his tools, or a surveyor with his instruments, a service voucher should be used. When the services of the person are accessory to the use of the material, as when a driver accompanies a hired team, the voucher is for hire of property, with mention of the personal service and the person rendering it, and the voucher for purchases and services other than personal should be used.

Whenever the amount of a payment depends on a period of time, as for subsistence or forage by the day, storage, rent of buildings or material, etc., the limiting dates must be included in the voucher. Full descriptions, including age, height, weight, color, sex, brands, etc., must accompany vouchers for the purchase of animals.

RENTALS.

BUILDINGS, OFFICES, ETC.

No building or office shall be rented or repaired in Washington, D. C., unless specific appropriation for the payment of the rent or repair thereof shall have been made by Congress.

No building, office, or land outside of Washington, D. C., for which the annual rental exceeds \$1,000 shall be rented or leased for Government use unless the agreement therefor be in writing and approved by the Secretary of the Interior. All such leases will be considered formal instruments.

Any building, office, or land outside of the District of Columbia, the annual rental of which does not exceed \$1,000 may be rented or leased by making therefor an informal written agreement in accordance with the procedure outlined under "Contracts" (p. 62).

The original copy and two carbon copies of every lease must be transmitted to the director, either with the voucher making payment thereunder or before such voucher is presented.

STORAGE, PASTURAGE, ETC.

Storage and pasturage accounts for fractional parts of months, if the rate charged is a monthly one, should be computed on the basis of the actual number of days in such months, unless otherwise specified in the agreement.

TELEPHONE SERVICE.

When authorized, regular telephone service should be provided for by the execution of contract form 6-774 at rates not to exceed the regular rates, the original copy to accompany the first voucher presented for payment under the contract.

WATER, GAS, ELECTRICITY, AND HEAT.

When water, gas, electricity, and heat are not furnished directly by the Government, and are not supplied as a part of the equipment of a rented building, a written agreement for this service must be made. If the total annual expenses to be incurred will not exceed \$1,000, a contract may be entered into by the director or the assistant director, in behalf of the United States, using the bureau's short-form contract (**Form 6-77**) executed in quintuplicate in accordance with the procedure outlined on page 62, following.

CONTRACTS.

The mode of preparing contracts involving large expenditures is prescribed in the following paragraph (Rev. Stat., sec. 3744) :

It shall be the duty of the Secretary of War, of the Secretary of the Navy, and of the Secretary of the Interior to cause and require every contract made by them severally on behalf of the Government, or by their officers under them appointed to make such contracts, to be reduced to writing and signed by the contracting parties with their names at the end thereof; a copy of which shall be filed by the officer making and signing the contract in the returns office of

the Department of the Interior, as soon after the contract is made as possible, and within 30 days, together with all bids, offers, and proposals to him made by persons to obtain the same, and with a copy of any advertisement he may have had published inviting bids, offers, or proposals for the same. All the copies and papers in relation to each contract shall be attached together by a ribbon and seal and marked by numbers in regular order, according to the number of papers composing the whole return.

Important formal contracts on behalf of the bureau must not be made without specific authority and instructions from the Secretary of the Interior, obtained through the director, and no contract involving a payment from public funds may be made in advance of an appropriation therefor by Congress.

With the approval of the director, less formal agreements having the force of contracts and involving only minor expenditures may be entered into by bureau officers whenever the interests of the service are served thereby. Examples of agreements of this type are those providing for office rent, pasturage, storage of public property, livery, telephone, water, gas, electricity, ice, and hauling. The form used for these agreements is 6-774.

Payment in advance of rendition of service is prohibited by statute, and employees are cautioned against entering into any contract or agreement that requires such payment. Contracts for the performance of a service involving a definite period of time can not legally be made to extend beyond the duration of the appropriation that makes provision for expenses of the period during which such contracts are executed.

If a contract for the delivery of property to the Government is not completed in the fiscal year in which it is made, but is completed in the next fiscal year, payment must be made from the appropriation for the fiscal year in which such contract was made.

SALES.

Sales of public property are not permissible except where the property has become unfit for use.

UNSERVICEABLE PROPERTY.

General authority is granted each year by the director for the disposal at auction of worn-out or useless property, the sales to occur at times and places designated by administrative officers in charge of such property.

Duplicate inspection reports (Form 1-514) must be prepared, giving a complete inventory of all property to be sold, with a statement of its condition and the reasons for its sale.

The property must be advertised by posters (Form 6-750). The posters should be put up in conspicuous places at least 48 hours

before the sale. All sales must be for cash, and a record must be made of each article sold, including the name of the purchaser and the amount received. Articles of small value may be sold in lots, but each item in the lot, as well as the price for which the lot is sold, must be reported. Inspection and sale reports must agree as to the items they include. Accounts of auction sales must be rendered in duplicate, on Form 6-70, and, as soon as practicable after the sale, must be forwarded, with the inspection reports, to the director through the proper division or section chief, together with the amount realized from the sale.

Public property that is unsalable and of no value may be disposed of as indicated on the inspection-report form.

DISBURSEMENTS.

Numerous Federal laws regulate the handling of disbursing funds. Disbursing agents are required to submit their official accounts to the accounting officers of the Treasury, who pass upon the legality of all disbursements made.

SPECIAL DISBURSING AGENTS.

Employees of the bureau who already hold appointments from the Secretary of the Interior may be designated by him to serve as special disbursing agents, no additional salary being attached to such designation.

BONDS.

Special disbursing agents must give bond before they can qualify as such at the Treasury Department. Bond forms, accompanied by instructions, will be furnished by the director to members of the bureau who are designated as disbursing agents. The amount of bond is fixed by the director, with the approval of the Secretary of the Interior.

CHECKS.

Special disbursing agents are required to have their funds deposited with the Treasurer of the United States.

They are also required, as a rule, to make disbursements by checks, and are thus relieved of the responsibility involved in the actual handling of cash. The Secretary of the Treasury may, however, specifically authorize disbursing agents to make payments in cash, by drawing for this purpose, in advance, through checks payable to themselves, a limited amount of money. Such authority is specific and not general. It permits the disbursing agent, when the needs

of the bureau require, to hold in his personal possession public funds to an amount not exceeding a fixed sum, thus relieving him of the necessity of making each payment by means of a separate check.

Check books for the use of disbursing agents are issued by the Treasurer of the United States. Instructions for their use are pasted inside the cover of each book. The stub, when properly filled, constitutes a complete record of the check and also shows the balance remaining to the credit of the disbursing agent in the depository.

Each check issued by a disbursing agent should state the object for which the disbursement is made.

Checks must not be signed in blank nor antedate the vouchers in payment of which they are given. Official checks must not be issued payable to bearer.

When one check is used to pay two or more vouchers, this fact should be recorded on each voucher by amending its brief to read, "Paid by part of check No. —."

LOST CHECKS.

If a check is lost the payee should immediately notify the disbursing office in writing, giving, if possible, the date, the number, and the amount of the check, in order that payment may be stopped at once by that office. He should then make every possible effort to trace the check through postal and other channels, and should report the result of his action to the disbursing office. If the check has not been found when this second report is made, the person interested will receive from the department a blank bond of indemnity for execution and return with an accompanying affidavit setting forth the circumstances attending the loss of the check. After the expiration of six months from the date of the original check, if for more than \$50, or after 90 days if for \$50, or less, a duplicate will be issued. If a check reported as lost is subsequently found, no attempt should be made to cash it until the disbursing office has been notified and the person in whose favor it is drawn has been informed that the necessary action to cancel stoppage of payment has been taken.

RENDITION OF ACCOUNTS.

Monthly accounts must be sent by the special disbursing agent to the Washington office within ten days after the end of the month to which they relate, and quarterly and other accounts within 20 days after the period to which they relate. Such accounts must then be transmitted to the auditor's office within 20 days of their actual receipt at the Washington office of the bureau in the case of monthly accounts, and within 60 days in the case of quarterly and other ac-

counts. Should there be any delinquency in this regard at the time of the receipt by the auditor of a requisition for an advance of money, he will disapprove such requisition. The requirement of mailing or otherwise sending accounts within 10 or 20 days may be relaxed and the delinquency, when there is manifest difficulty in complying with this requirement, may be waived by authority obtained through the director from the Secretary of the Treasury.

In rendering accounts all vouchers to be submitted must be entered on the regular form of abstract provided, showing the number, the payee, and the amount paid under each appropriation, and the total of the abstract must be carried to the prescribed form of account current.

Rendered accounts must also conform with the requirements of Treasury Circular No. 52, dated July 29, 1907.

GENERAL RULES.

The name of the disbursing agent who furnishes the funds is written in the body of the receipt at the top of the pay roll. The certificate at the bottom of the roll is signed by the officer under whose direction the services were performed.

Disbursing officers, before making final settlement with a discharged employee, should be furnished with evidence that he has turned in all Government property in his possession.

All accounts must be approved by the director, the assistant director, or the subordinate officers to whom such authority has been delegated before being paid by a disbursing officer.

ACCOUNTING.

Administrative accounting embraces all regular and allotment bookkeeping covering accounts with appropriations and disbursing agents. The recording of receipts from all sources and disbursements for all purposes; the keeping of a classified record of expenditures; the preparing of all requisitions for disbursing funds; the administrative examination of all accounts presented for payment by the bureau; the preparation of all statements and reports regarding fiscal affairs and conditions; and such other work as is required for a proper discharge of the duties connected with these matters.

An account will be kept in the section of accounts with each allotment made out of regular bureau appropriations, against which must be charged under the proper classified head all expenditures of every sort pertaining to the work in the period for which the allotment is made, including salaries of permanent and temporary employees, transportation, expressage, freight, subsistence, and mis-

cellaneous expenses. From this record a monthly statement will be prepared showing for each allotment account the expenditures, the unliquidated encumbrances, and the net balance.

The section of accounts will keep records that will show at the close of any given period, in detail and by sources, and under the digest headings fixed by the Treasury Department, all revenues collected and deposited, the amount of each appropriation, the withdrawals and disbursements therefrom, the amounts refunded, the total obligations unpaid, and the available balances remaining in each fund.

Requisitions for disbursing funds will be prepared in the section of accounts upon memorandum requests of disbursing agents concerned, which must be accompanied by such original paid vouchers and pay rolls, with abstract thereof, as will enable the section of accounts to determine that actual unexpended balances of disbursing agents, plus the total advances desired, are within the sum allowable.

Records of personal accounts with all officers designated to disburse bureau funds will be kept in the section of accounts, and the items of such records, when posted from the accounts current as audited and submitted to the Treasury Department for settlement, must show the advances on warrant, the sums expended or refunded, and the balances on hand.

All vouchers and pay rolls presented for payment by the bureau, and all claims for adjustment of accounts by settlement, transfer of funds, or counter warrant, shall receive administrative examination in the section of accounts before being submitted for the approval of the director or the assistant director.

PROPERTY.

CLASSIFICATION.

Government property is classed as expendable and nonexpendable. Any article that is perishable, or that is consumed by use, or that is an essential part of an article otherwise accounted for, shall be classed as expendable. Any article that endures in service, or that when in use does not form an essential part of another article otherwise accounted for, shall be classed as nonexpendable. In case of doubt as to whether an article should be classed as expendable or nonexpendable, reference should first be had to the appended lists of expendable and nonexpendable property (pp. 68 to 72), and if doubt still remains, the question should then be referred to the director for decision.

ACCOUNTABILITY.

Officers of the bureau purchasing expendable property are the custodians of such property, and at the close of each fiscal year they

must certify that all property acquired during that year has been properly expended for official use, or that the unused articles are available and are stored under stated conditions. Officers and employees of the bureau purchasing nonexpendable property, or to whom such property has been issued, will be held strictly accountable therefor in accordance with a record of such nonexpendable property maintained at the headquarters office of the bureau.

Employees leaving the bureau either temporarily or permanently must surrender all identification, telegraph, and express cards, as well as all other public documents belonging to the bureau, and must return or account for all property charged against them. Failure to comply with this regulation will result in salary being withheld until all documents and property are accounted for satisfactorily.

RECORDS.

A permanent accountability record of all nonexpendable property will be maintained at the headquarters office of the bureau. All vouchers of the bureau are examined at the headquarters office, and a receipt card (Form 6-736), prepared in triplicate for each article of nonexpendable property acquired, will be made direct from these vouchers. The original card (white) will be sent to the person responsible for the article listed, to be returned by him, with his signature, for filing in the accountability record at the headquarters office; a memorandum copy (blue) will be filed in the proper field office; and a third copy (yellow) will be filed in the personal records of the individual responsible for the article acquired. When nonexpendable property is transferred from one employee to another, the yellow cards covering the articles released should be forwarded to the person who assumes responsibility for the property. When nonexpendable property is transferred from one field office to another the blue cards covering the articles transferred should be withdrawn from the files of the field office releasing the property and after appropriate notation thereon should be forwarded for the files of the field office receiving the property.

INVENTORIES.

Physical inventories of nonexpendable property must be taken by the various section chiefs on the dates designated and in accordance with and under such instructions as may be issued by the director.

TRANSFER OF NONEXPENDABLE PROPERTY.

Nonexpendable property transferred from one person or section to another should be reported promptly on transfer card (Form 6-86). This card is prepared in triplicate, one copy for the files of the

transferee, one for the files of the Washington office, and the third for the files of the transferor. The prompt use of transfer cards is necessary to insure the keeping of accurate records and to hold the proper person responsible for the property transferred.

DISPOSITION OF NONEXPENDABLE PROPERTY.

Nonexpendable property may wear out, or be lost, stolen, or abandoned. When it is worn out, or is in such condition as to warrant the disposal thereof by auction sale, an inspection report (Form 1-514), properly certified, should be prepared and transmitted to the director, asking authority for the disposal of the property as recommended. Government property, the sale of which has been approved by the director, must not be purchased either directly or indirectly by the person or persons responsible for the property at the time of condemnation. If nonexpendable property is lost, stolen, or abandoned, a certificate of abandoned or lost property (Form 1-515), properly certified, should be prepared and transmitted to the director for approval. When Government property has been lost or stolen through no negligence on the part of the user or the person in charge of the property, and it is possible to recover the same, reasonable charges for its recovery are allowable.

PROTECTION AND STORAGE OF PROPERTY.

Employees are cautioned to exercise great care in the preservation and maintenance of property under their control. Such property should be thoroughly dry before being packed or stored, and all apparatus should be frequently inspected and overhauled, and be kept in good repair at all times.

BOXING AND SHIPPING.

All property intended for shipment should be put in proper shape for that purpose, and should be carefully packed or wrapped. Particular care should be exercised in packing delicate or fragile articles; these should first be wrapped with crumpled newspapers or tissue paper, and then inclosed with a layer of excelsior or straw, to prevent breakage or injury during transit. The same precautions should be taken with delicate or fragile articles to be shipped in a wooden box or other container.

LIST OF NONEXPENDABLE PROPERTY.

The following is a list of nonexpendable property for field, laboratory, or office use which will serve as a guide in the matter of prop-

erty classification and accountability. The list is not complete, and should not be considered as representing all articles of a nonexpendable nature now belonging to the bureau or that may hereafter be acquired. It will be amended from time to time by supplemental lists.

Accumulators.	Coffee mills.	Furnaces, metallic muffle.
Adses.	Combustion chambers.	Gages, wire.
Ammeters.	Comforts, bed.	Galvanometer repair kits.
Anemometers.	Comparators.	Galvanometers.
Animals (horse, mules).	Compasses, beam, box	Generators.
Annunciators.	clinometer, dial, dip, pris-	Glasses, field, magnifying,
Anvils.	matic, etc.	and thermometer reading.
Apparatus (rescue, engineer-	Compressors.	Gloves, rubber (for rescue
ing, etc.).	Compressometers.	work only).
Aspirators, metallic.	Condensors, metallic.	Graphophones.
Augers.	Cones, platinum.	Grinders.
Axes.	Controllers.	
	Conveyors.	
	Coolers, water.	Hammers.
Balances, analytical.	Cots.	Harness.
Balances, spring.	Counters.	Hatchets.
Barometers, aneroid and	Couplers.	Heat testers.
mercurial.	Couples.	Holsts.
Bars, pinch.	Cranes.	Holders, tool.
Basins, wash.	Crucibles, platinum.	Hones.
Baths, laboratory.	Crushers.	Hoods.
Beaters, egg.	Cups, granite, rubber.	Horses, wooden.
Bellows.	Curves.	Hydrodeiks.
Bells, assorted.	Cuspidors, metallic.	Hygrometers.
Benches.	Cutters, clinch.	
Binders, loose-leaf.	Cutters, pipe.	Indicators.
Bits, auger.	Cutters, wire (see also	Instruments, drawing.
Blackboards.	pliers).	Irons, soldering.
Blankets.	Cylinders, metal.	
Blowpipes.		Jacks.
Boards, drawing, etc.	Daters, rubber.	Jigs.
Boats, platinum.	Desks.	
Boilers.	Dies.	Kettles.
Bookcases.	Diggers (post-hole).	
Boots, rubber (for rescue	Dippers, ladles, etc.	Ladders.
work only).	Dishes, platinum.	Lamps.
Borers, cork.	Dividers, plain, propor-	Lanterns.
Boxes, ice.	tional, spring, etc.	Larries, coke.
Boxes, tool.	Door checks.	Lathes.
Braces, carpenter's.	Drawing instruments.	Lenses, camera, magnifying,
Burners, Bunsen, meter, etc.	Drills ($\frac{1}{4}$ -inch and over).	etc.
		Letters, metal.
Cabinets.	Engines.	Levels, engineer's, hand, cir-
Callipers.	Expanders.	cular, spirit, etc.
Calorimeters.	Extinguishers, fire.	
Cameras.		Machines, computing and
Car movers.	Figures, metal.	numbering.
Cases, drawing-board,	Filing furniture.	Magnetos.
leather, map, note-book,	Filters (water).	Magnets.
brief or portfolio, file, etc.	Flags, pennants.	Mallets.
Cathetometers.	Flags, United States, Red	Mattresses.
Centrifuges.	Cross, etc.	Mauls.
Chains.	Flasks (copper).	Measures, metallic.
Chairs, office and camp.	Flatters.	Meters, gas, water, etc.
Chisels.	Forceps.	Micrometers.
Chronometers.	Forks, pitch.	Microscopes.
Clamps, belt.	Forks, table, blasting, etc.	Microtomes.
Clamps, carpenter's.	Frames, hack-saw.	Millivoltmeters.
Claws, nail.	Funnels, adjustable top.	
Clocks.		

Mills, grinding, pebble, ball, coffee.	Relays.	Supports, iron, for laboratory use.
Mimeographs.	Release starters.	Switchboards.
Mixers.	Respirators.	
Mortars and pestles (agate or iron).	Retorts, metal.	Tables.
Mortars.	Rheostats.	Tampers.
Molds.	Rings, iron.	Tanks, oxygen, hydrogen, acetylene, etc.
Multimeters.	Riveting sets.	Tapelines.
	Rods, leveling, stadia, transit, etc.	Tapes, cloth, metallic, steel, etc.
Nippers.	Rules, slide.	Telescopes, astronomic and engineer's.
Nozzles, hose.	Rulers, parallel.	Tents.
Numbering stamps.	Salamanders.	Testers, heat.
	Samplers.	Thawers, dynamite.
Oil testers.	Saws.	Timing devices.
Openers, can, letter.	Scales, graduated, triangular, etc.	Tongs.
Ovens.	Scoops.	Tools.
	Screens, window, etc.	Torches, gas blow.
Pans, frying, bread, dish, stew, etc.	Screw drivers.	Transits.
Pedometers.	Scythes.	Trays, wood and metal.
Pens, bow, ruling, etc.	Sealers.	Trees, coat.
Perforators.	Shapers.	Triangles.
Picks.	Sharpeners, automatic pencil.	Tripods, iron (see also stands).
Pillows.	Shears, editor's, tinner's, office, etc.	Troughs.
Planes.	Sheaves, cast-iron.	Trowels.
Planimeters.	Shovels.	Trucks.
Platinum wire, over 1/10 mm.	Shunts.	Trunks.
Pliers, cutting.	Sieves.	Tubs.
Plumb bobs.	Silencers, gun.	Tumblers, spur, etc.
Polymeters.	Skillets.	Tunnels, adjustable-top.
Potentiometers.	Snips.	Typewriters.
Pots, coffee, tea, etc.	Soldering outfits.	Typewriter swinging shelves.
Presses, cork and letter.	Spades.	
Protractors.	Spatulas, metallic.	Viscosimeters.
Psychrometers.	Spectroscopes.	Vises.
Pullers, nail.	Spoons, basting, table, tea, etc.	Volt boxes.
Pulleys.	Sprinklers.	Voltmeters.
Pulsometers.	Squares, T.	
Pulverizers.	Squeezers, lemon.	Wagons, road (buckboards, carts, etc.).
Pumps.	Stamps, numbering.	Watches.
Punches.	Stamps, self-inking.	Wattmeters.
Pyrometers.	Stands, ring and instrument.	Weights.
	Staplers, paper.	Wet pans.
Racks, test-tube and stamp.	Steels, butcher's.	Wheelbarrows.
Rakes.	Stocks and dies.	Wheels (iron).
Reamers.	Stokers, mechanical.	Wire, platinum, over 1/16 mm.
Recorders and registers.	Stools, camp.	Wrenches.
Reels, hose.	Stoves.	
Reflectors.	Straight edges.	
Refractometers.	Stretchers.	
Refrigerators.		

EXPENDABLE PROPERTY.

Acids, hydrochloric, nitric, sulphuric, etc.	Borax.	Burners, lamp.
Alcohol.	Bottles (glass).	Cable, wire.
Apparatus, glass, chemical.	Boxes, packing.	Candles.
Bags, paper, jute, cotton, rubber.	Bowls.	Cannon.
Bandages, cotton, gauze, triangular.	Brooms.	Canvas.
Bolts, iron, copper.	Brushes.	Cartridges, potash, interchangeable.
	Bulbs (inflation, flashlight, incandescent).	Cases, pillow.
	Burlaps.	Cement.

Casseroles.	Laces.	Rope.
Chains.	Lampblack.	Sacks, grain, specimen, etc.
Chamois.	Lead.	Salt, stock, table.
Chimneys, lamp, lantern.	Leather.	Sapallo.
Cloth, oil, signal, table, tracing, etc.	Lifters, stove.	Saucers.
Cord.	Lumber.	Screws.
Collars, horse.	Lye.	Sheets.
Cotton, absorbent.	Maps.	Soap.
Crash, kitchen.	Matches.	Soda, washing.
Crockery.	Medicine.	Solder.
Cups and saucers.	Mops.	Spikes.
Dishes, table.	Nails.	Sponges.
Drills, less than $\frac{1}{2}$ -inch.	Napkins.	Staples.
Engraving supplies.	Oil, coal.	Stationery.
Files, metal, machinists's.	Packing, oxygen, engine, dynamo.	Straps.
Forage (hay, grain, etc.).	Paint.	Subsistence.
Fuel.	Paper, tracing, wrapping, etc.	Tablecloths.
Fuses.	Photographic supplies.	Tacks.
Gaskets.	Pillow cases.	Tags.
Globes, lantern.	Pipe, stove.	Thread.
Glue.	Plates.	Tin.
Handles, ax, hammer.	Platters.	Towels, dish, face, etc.
Hasp and staple.	Powder, blasting.	Tubing (flexible).
Hinges.	Pumice.	Turpentine.
Hose.	Reducers, hose and tank.	Twine.
Iodoform.	Rings.	Washers.
Iron (for repairs).	Rivets.	Wax.
Laboratory supplies.		Wicks.
		Wire.

LIST OF STATIONERY AND MISCELLANEOUS SUPPLIES PROCURABLE ON REQUISITION.

Baskets, desk, waste, etc.	Ink, drawing, fountain-pen, writing, for numbering machines and stamp pads.
Blotters, desk, hand.	Inkstands, desk.
Bristol board.	Labels, gummed.
Brooms, floor and whisk.	Mail openers.
Brushes, paste, typewriter, etc.	Matches.
Brushes, hand, hair.	Mops and handles.
Buckets.	Mucilage and mucilage cups.
Cardboard.	Oil for typewriters.
Clips.	Oilers.
Chamois.	Pads for desks.
Combs and brushes.	Pads for rubber stamps.
Copying book, pen carbon.	Paper, adding-machine, blotting, carbon, cross section, manila, manuscript, mimeograph, note, tissue, typewriter.
Crayons, wax.	Paper fasteners, "O. K.," "Easy-on," pinch, "Bulldog," etc.
Cuspidors.	Paper weights.
Dater, band.	Paste, in tubes, in jars.
Drawing ink, Higgins's.	Pencils, various kinds (black and colored).
Dustpans.	Pencil-point protectors.
Envelopes, azure cloth-lined, manila, white, various sizes.	Penholders, plain, drawing, K. & E.; solid rubber, Nos. 1, 2, 3.
Erasers, rubber and steel.	
Files, bill, box, pasteboard.	
Finger shields.	
Folders, paper.	
Glue.	
Hones.	

Pen racks and trays.	Sponges and cups.
Pens, assorted; drawing, Gillett.	Stenographer's notebooks, pen and pencil.
Pins, in pyramids, in boxes.	Tablets, writing.
Post cards, plain.	Tacks.
Press copy books.	Tags, linen.
Rubber bands.	Tape, red.
Rulers, 12-inch to 24-inch, rubber and wood.	Thumb tacks.
Sandpaper pencil pointers.	Tumblers.
Sealing wax.	Twine, large and small.
Shears.	Typewriter ribbons.
Soap, toilet and scrubbing.	

CORRESPONDENCE.

REFERENCE OF LETTERS.

Official correspondence received at the Washington office of the bureau is opened in the section of mails and files and referred to the proper division, section, or field station for attention.

Communications which show that there has been previous correspondence on the same subject are placed in a folder with that correspondence before reference, in order that the necessary information or data may be at hand for framing an intelligent and prompt reply. The entire correspondence is then charged on a special charge slip to the person receiving it.

Letters for reference to field officers, when no special instructions or extended remarks are necessary, should be accompanied by reference slips (**Form 6-12d**) giving the date, name of writer, subject, and purpose for which the letter has been referred, a duplicate being retained as a memorandum of the reference. All letters referred outside of the Washington office should receive prompt attention, and in every case delays should be avoided.

PREPARATION OF REPLIES.

Correspondence with congressional committees or with heads of departments of the Government, estimates for Congress, or communications relating to the broader matters of departmental policy, shall be conducted through the office of the Secretary of the Interior, unless the policy under consideration has already been determined by him, when the letters should be prepared for the signature of the director and in accordance with the Secretary's decision.

All correspondence stamped or marked "Prepare reply for Secretary's signature," or "P. R. S.," must be answered within 48 hours, and should the preparation of a full reply within that time be impossible or impracticable, the receipt of the letter must be acknowledged and the statement made that a full reply is being prepared and will be forwarded at the earliest opportunity. Each letter prepared for departmental signature must be accompanied by two carbon copies, together with the original inquiry, one carbon copy to be initialed by the director or assistant director and the other to be left blank for authentication and return to bureau files with the original inquiry. When a letter relates to more than one bureau or person, additional carbon copies should be made. An additional carbon copy

should also be made and forwarded with each report on public bills to the Committee on Public Lands. In each case where extra carbons are made, the name of the bureau or person for whom they are intended should be indicated on the carbon.

Official mail intended for signature by the Secretary, if it be more than two pages in length, should bear on its face a brief typewritten abstract of the contents, stating briefly the nature of the communication and to whom it is addressed, followed by a paragraph stating in direct and succinct style the salient point or points covered by the communication. If there is anything in the communication which requires immediate action, that fact should be indicated in a concluding paragraph.

When a letter is referred to the bureau by a Member of Congress the reply to this letter should contain a statement that the action taken is at the Member's request. If the referred letter is request for publications, the reply should state that they are sent at the Member's direction. In every case the Member of Congress should be informed of the action taken by the bureau in compliance with his request.

DATES.

In dating a letter the month should not be abbreviated, but should be written in full; and figures only should be used for the day of the month and year, for example, "March 4, 1913," not "Mar. 4th, 1913." On letters for departmental signature the date line should be left blank.

ADDRESSES.

When the name and address occupy more than two lines they should be single spaced; if only two lines are required, these should be double spaced. The prefix "Mr." should be used in preference to the suffix "Esq." Scholastic degrees and official titles should be abbreviated when used in addresses, but titles of high rank, such as "President" and "Governor," should not be abbreviated. "Prof." may be used before the name of any person occupying a chair in a university or other educational institution. The prefix "Hon." should be employed when addressing Members of Congress and the higher Government and State officials. The President should be addressed, "The President"; the Secretary of a department, as "The Honorable the Secretary of ———", using two lines. Senators should be addressed as "Hon. ———, United States Senate"; and Representatives as "Hon. ———, House of Representatives," when in Washington. Addresses in diplomatic correspondence should appear as given in the "Diplomatic List" issued from time to time by the State Department, or as given in the Congressional Directory.

Correspondence with the various Government bureaus should invariably be addressed to the chief of the bureau concerned, the desig-

nation of the bureau chief to be stated in the first line and the name of the bureau on the second line. In intrabureau correspondence the address will be omitted and the various officers, wherever possible, addressed by title.

Employees assigned to regular or temporary duty in the field are requested to keep both the Washington office and their field headquarters informed promptly of every change of address, so they may be reached promptly by letter or telegram. Many employees have been derelict in this regard, and have thereby caused much trouble and annoyance by inability to reach them promptly when important matters have arisen. Each employee traveling on official duty should provide himself with a supply of address cards (**Form 6-27**), and fill out and forward both his mail and telegraph address on these cards promptly. He should also promptly inform the postmasters of his forwarding address whenever a change from one city to another is made; form **1-044** may be used for this purpose.

SALUTATIONS.

The formal salutations "Sir," "Gentlemen," and "Madam," should be used only in letters of a distinctly formal character. For ordinary correspondence the usual salutations should be "Dear Sir," "My dear Sir," "Dear Madam," or "My dear Madam," and "My dear Mr. ———," if the person is known to the signer or has had previous correspondence with him. Letters to bureau chiefs should have the salutation "My dear Mr. ———." The stenographer is expected to use discretion in the application of this rule; and, in general, should see that the salutation corresponds to that of the original letter; for example, a letter addressed to "My dear Mr. Holmes," should be answered with the salutation "My dear Mr. ———."

In letters for the signature of the Secretary the salutation should be as follows: For Senators, "My Dear Senator"; for Representatives, "My Dear Mr. ———."

BODY OF LETTER.

The preliminary sentence in a reply should usually refer to the date of the original letter to which reply is made, stating the month by name, and not by "instant," "ultimo," or "proximo." It should also contain a reference to any file numbers, initials, etc., to which the attention of the addressee of the original letter has been called.

The subject of a letter always should be stated concisely and accurately in the opening paragraph of the letter, and, unless absolutely impracticable, every letter should be devoted to a single subject, as the bureau's correspondence is filed and handled specifically under individual cases or subjects. When more than one sub-

ject must be included in a letter, carbon copies covering each subject should be forwarded for cross-reference purposes. The following are approved examples of beginnings and methods of stating subjects:

In reply to your letter of July 1 (file No. 4G-LHR) regarding * * *.

The bureau is in receipt of your letter of August 2, concerning * * *.

In reply to your letter of July 3, in reference to * * *.

In response to your letter of July 3, asking for information on * * *.

The body of a brief letter should be double spaced; but when a letter that would require more than one page as a double-spaced letter can be written on one page as a single-spaced letter, single spacing should be used. In all cases of a letter running over to a second page, the stenographer should see that the second page contains at least two lines, exclusive of the closing phrase. Quoted statements or extracts in the body of a letter, when of any considerable length, should invariably be single spaced, and indented from the left-hand writing margin.

MARGINS.

A margin of about an inch and a quarter or not too wide to allow the address to come too far to the right and be concealed in the open-faced envelopes should be allowed on the side of all letters and a space of not less than 2 inches on the top of each page of letters or documents. Letters and documents should be paged at the bottom of the page in the center.

PARAGRAPHING.

A new paragraph should be made at every change of the subject or at the introduction of a new phase of the same subject. Paragraphs should begin about 8 or 10 spaces on the typewriter scale from the left-hand writing margin of the letter.

PUNCTUATION.

Sufficient punctuation should be used to make the text clear, care being taken not to omit necessary punctuation marks nor to carry punctuation to extremes.

CAPITAL LETTERS.

Capitalize geographic names such as "River," "Bay," "Island," and also "State," "County," etc., when used with a proper name, and "Street" and "Avenue" in addresses.

COMPLIMENTARY CLOSING.

The closing phrase should conform to the character of the salutation. The closing phrase for formal letters should be "Very respect-

fully," or "Respectfully"; but for ordinary correspondence the forms "Very truly, yours," "Sincerely, yours," "Cordially, yours," etc., are preferable. In interbureau correspondence the complimentary closing should be "Sincerely," and in interdepartmental bureau correspondence, "Very truly, yours." In letters to be signed by the Secretary, the complimentary closing should be "Cordially, yours."

SIGNATURES AND TITLES.

A letter that relates to work for or with another bureau of the Government should be prepared for the signature of the director (and in his absence for the signature of the acting director), unless it relates to work already initiated or approved by the director, or is of a more or less routine character dealing with tests and investigations for the benefit of the bureau concerned. Correspondence of this latter class shall be prepared for the signature of the assistant director.

The title of the signing officer in intrabureau correspondence should be left blank, but in letters to outside parties and to Government bureaus the title "Director," "Assistant Director," or other signing officer, is to appear below and to the right of the complimentary closing, sufficient space being left for the signature. In correspondence prepared for the signature of the Secretary the word "Secretary" should be omitted.

PREPARING CORRESPONDENCE FOR SIGNATURE.

After a letter is written, the stenographer will attach with a clip the original and the carbon copy to the letter to which it is a reply, in such manner that the carbon copy will extend about an inch below the original to permit initialing and easy separation.

TRANSMITTING CORRESPONDENCE FOR SIGNATURE.

After the correspondence is completed by the divisions and sections it should be forwarded to the mails and files section for checking of addresses, typographic errors, etc., and to insure that the letters are prepared in accordance with the regulations.

INITIALS.

The autograph initials of the author should appear in the lower left-hand corner of the carbon copy, and the typewritten initials of the stenographer and dictator should be placed in the upper right-hand corner of the carbon copies of all official correspondence. The initials of the bureau officials are to be placed in the lower left-hand corner of the carbon copy in letters prepared for the Secretary's signature.

USE OF SPECIAL SLIPS.

Slips containing the word "Special" (Form 1-045) should be used with rush letters—that is, letters demanding immediate consideration because of some exigency requiring that they be immediately placed in the mail. Letters to which such slips are attached shall be acted upon in advance of all other mail.

USE OF RED TAGS.

All persons charged with the preparation of correspondence for signature are instructed to attach red tags, which may be obtained on requisition, to all letters relating to questions of policy not previously approved by the director or assistant director, and to all letters of an important character that should receive special consideration by the signing officer. The use of these red tags is designed to bring to the attention of the official signing the communications all matters of importance that should receive special consideration, and section chiefs and others are expected to use discretion in employing them.

HANDLING OF INCLOSURES.

The use of inclosure slips has been adopted for the purpose of positively identifying inclosures intended to accompany correspondence. The abbreviation "Incl." followed by a dash and the number appearing on the inclosure slip, as for example, "Incl.—9968," should be placed by the stenographer in the lower left-hand corner of the letter. The inclosure slip should then be pinned or clamped to the inclosure, so that it may not become readily separated therefrom. Form 1-038a should be used for all inclosures accompanying letters signed by the Secretary.

Inclosures of a bulky nature may be detached from the correspondence and sent separately to the mails and files section, but it is advisable to attach the inclosure to the outgoing letter, when practicable, to facilitate handling.

MAILING.

After signature, all letters and papers should go to the proper section for removal of carbon copies, checking signatures and inclosures, and for mailing. When letters are mailed direct by a division or section, the carbon and retained papers should be sent promptly to the proper section for filing.

For transmitting letters and papers between the Washington office and the field stations, the large printed manila envelopes, sizes 15 by 10 inches and 12½ by 9 inches, should be used in preference to a number of the smaller envelopes. For less bulky papers use the

bulletin-size envelopes, size $10\frac{1}{2}$ by $6\frac{1}{2}$ inches. Letters from field offices for signature should always be sent in the large manila envelopes unfolded. In general correspondence and for single letters in bureau correspondence, the open-face envelopes should be used whenever the No. 9 printed-address envelopes are not applicable. It is not necessary to attach open-face envelopes to letters to be signed by officials in Washington. For foreign correspondence the regular No. 9 envelope should be used and addressed by the stenographer and not the open-face envelope. It is the stenographer's duty to address all envelopes that require addressing.

FORWARDING MAIL.

All mail, whatever its class, addressed to persons in the United States service (civil, military, or naval), serving in the United States or any of its possessions, or en route to or from the United States or any of its possessions, whose change of address is caused by official order, shall be transmitted as rapidly as possible until it reaches the addressee; * * * and no additional postage shall be required therefor. (Sec. 595, Postal Laws and Regulations.)

Form 1-044 may be used to request postmasters to forward mail.

In order to insure proper delivery without payment of additional postage of second, third, and fourth class matter addressed to employees as above, the envelope or package should bear the words "Change of address due to official orders," either in writing or by use of a rubber stamp.

OFFICIAL MAIL.

The law provides that there may be transmitted through the mail in penalty envelopes or under penalty labels any letters, packages, or other matter relating exclusively to the business of the United States.

The law also provides that whoever shall make use of any official envelope, label, or indorsement authorized by law, to avoid the payment of postage or registry fee on his private letter, packet, package, or other matter in the mail, shall be fined not more than \$300.

Official matter partaking of the characteristics of fourth-class mail, weighing not in excess of the limit of weight prescribed for fourth-class matter, when presented under a penalty envelope or label, will be accepted for mailing at any post office.

No article, package, or other matter is admitted to the mails under a penalty privilege unless such article, package, or other matter is entitled to admission to the mails under laws requiring payment of postage.

In order that bureau employees may not include matter of the first, second, or third class in envelopes or packages to be transmitted

by parcel post, and thereby subject such matter to rejection by the postmasters, the following outline of classification of mail is given:

First class: Letters, postal cards, and all matter wholly or partly in writing; limit of weight, 4 pounds.

Second class: Newspapers and periodicals mailed by the publisher.

Third class: Books (only until Mar. 16, 1914), circulars, and other matter wholly in print, proof sheets, corrected proof sheets, and manuscript copy accompanying the same; limit of weight, 4 pounds, except for printed matter mailed at Washington, D. C.

Fourth class (parcel post): All other matter, including farm and factory products, and books not now embraced by law in either the first (or) second class, or (with the exception of books, in the) third class, not exceeding (50) pounds in weight (when mailed for delivery within the first and second zones, nor exceeding 20 pounds in weight when for delivery in any of the other zones), nor greater in size than 72 inches in length and girth combined, nor in form or kind likely to injure the person of any postal employee or damage the mail equipment or other mail matter, and not of a character perishable within a period reasonably required for transportation and delivery.

Whenever such action is possible, such articles weighing over 4 pounds as are fourth-class matter should be sent by parcel post under Government penalty label, instead of by express. Before such articles are mailed there should be reasonable certainty that they are mailable by parcel post.

REGISTERED MATTER.

Official registration labels (Form 6-34) have been provided for use both at Washington, D. C., and at places outside of Washington where official matter is registered.

When official matter is mailed elsewhere than at Washington, D. C., the use of these envelopes and labels does not permit the free registration of the mail with which they are used. Government officers located at Washington, D. C., whose official mail may be registered free there, under the above statutes, may have such mail registered free elsewhere when they are temporarily away from Washington, but not those officers who are permanently away from that city or who are engaged in field service for their respective departments. Matter entitled to free registration by officers or employees of the Government temporarily absent from Washington should be indorsed over their signatures with the words "Temporarily absent from Washington, D. C." It will therefore be necessary for the field stations to place on the envelopes and labels the necessary postage.

All classes of official mail matter can be registered.

INSTRUCTIONS FOR STENOGRAPHERS AND TYPISTS.

Good typewriting work is impossible unless typewriters are kept clean and in good condition. Operators are expected to see that the working parts of their typewriters are kept oiled and free from dust and that the type is frequently cleaned and kept in condition for clear and satisfactory work. Typewriting machines will be inspected monthly.

A black record ribbon should be used for all correspondence.

Letters to be signed by the director or acting director should be written on heavy bond paper with the words "Office of the Director" printed in the upper left-hand corner. A lighter bond paper should be used for letters prepared for the signature of the assistant director and for correspondence between divisions, sections, and field offices. Care should be taken that the same grade of paper is used for all pages of the same letter.

EMPLOYEES' PERSONAL MAIL.

Employees occupying permanent headquarters are requested to have their personal mail, and especially newspapers and periodicals, sent to their home addresses instead of to the bureau. This refers to all mail of the above class, whether solicited or unsolicited.

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PUBLICATIONS.

CLASSES.

The Bureau of Mines issues four classes of publications, as follows: Annual reports, bulletins, technical papers, and miners' circulars.

The annual reports deal with the purpose of the bureau's investigations, the conduct of these investigations, and the progress made. The bulletins present the more detailed and permanent results of the different inquiries and investigations. Technical papers contain preliminary statements regarding investigations in progress or the results of studies and inquiries incidental to such investigations. Miners' circulars are intended chiefly for popular reading. They deal especially with the prevention of mine accidents, with mine rescue and first-aid equipment and methods, and with other matters of general interest to men actually engaged in mining.

Before beginning the preparation of a report for publication an author should note the distinguishing features of the four classes of publications. Also, he should bear them in mind while writing the report. In case the author has doubts as to the proper classification of his report he should consult his division chief. In case a report does not clearly belong to the particular class designated by its author, it will be assigned to its proper class by the editorial section. In case this assignment is not approved by the author and his division chief, a final decision in the matter will be made by the director or assistant director.

GENERAL INSTRUCTIONS REGARDING PREPARATION OF PUBLICATIONS.

Authors should take pains to have all copy properly prepared. Every report submitted for publication should be typewritten on letter paper (preferably sheets 8 by 10½ inches) of ordinary thickness. Thin manifold paper is not acceptable, and reports written on such paper may be returned to the author for the preparation of suitable copy. The author should have one or more carbon copies of his manuscript made, but should always transmit the original, not the carbon copy. It is important that the typewriting should be on only one side of the paper. Copy should never be typewritten "solid," not even extracts from other publications. All matter should be triple spaced, except extracts, which should be double

spaced. Authors should remember that it is far more important to leave ample room for changes, corrections, or notations than to fill a sheet completely with writing; hence a margin of at least $1\frac{1}{2}$ inches should be left down one side of the sheet and a space of at least one line at the bottom. Sheets or strips of paper should not be pasted together to form sheets longer than letter size.

In preparing tables, authors should take the same precautions to leave room for changes, corrections, or marginal notes as in the preparation of the text. Tables may be prepared on sheets of any size that can be conveniently handled, but it is not necessary that all of a table should appear on one sheet, and the handling of copy will in many cases be facilitated by preparing all tables in sections on several sheets. Copy for bibliographic and similar work may be written on cards, either typewritten or long hand in ink. Pencil notes on cards will not be accepted as copy.

After the author has completed the final revision of his manuscript, he should, before transmitting a copy, number the pages consecutively, including any material written on cards. Drawings or photographs intended as copy for illustrations should not be inserted in the text but should be kept distinct from the manuscript. If a manuscript is to be mailed it should be kept flat and never folded or rolled. Material for illustrations should be sent in such manner as will best prevent damage. Photographs or small drawings should be sent flat in secure envelopes or packages. Large drawings and blue prints should be rolled and sent in mailing tubes.

An editor is expected to make no changes in the manuscript that will change the author's meaning, so far as this is determinable from the context. Only such changes will be made as will correct or improve the author's English, and make his statements more clear to the intended readers. Editorial changes are interlined in pencil or indicated in marginal notes or on attached slips of paper. The editor will also call the author's attention, by query or note, to any statements that seem to be misleading or contradictory or incorrect.

Manuscript corrected by the editor will be returned uncopied to the author for his approval or other comment. Pages bearing many revision changes should be recopied, but the old copy, in addition to the new, should be returned to the editor who will see that the manuscript is in proper form for approval by the director or assistant director and for transmittal to the department for printing.

Inasmuch as a department regulation prohibits extensive changes in proof, it is expected that manuscript will be in shape for publication when sent to the department. It is therefore expected that few alterations will be necessary in galley proof, and that no changes by the author will be necessary in page proof.

Manuscripts will usually be given the following rank in order of editing: (1) miners' circulars, (2) technical papers, (3) bulletins.

Manuscripts that are accurate in statement, logically arranged, and written in a clear, concise style will be given precedence over those that have been prepared with less care.

DETAILED INSTRUCTIONS RELATIVE TO PREPARATION OF REPORTS.

To prepare a good report is not a task that requires special training or literary talent, but it does require clear thinking, command of the subject, and the taking of pains to express all ideas plainly.

An author should never begin writing a paper for publication until he has familiarized himself with the general features of that class of Bureau of Mines reports in which he wishes his report to be included. It is of the utmost importance that he give careful consideration to the arrangement and order of his statements, and for this reason he should prepare a scheme of headings and subheadings for his report before he begins work on the text.

METHOD OF WRITING.

Before the author starts to write his report he should be thoroughly familiar with the results of the investigation to be described, should have carefully studied any samples that are to be described, and should have ready the photographs or drawings that are to be used for illustrations. He should also have assorted and classified his notes and other material in such manner that he can readily refer to them, and preferably should have grouped the material according to the general scheme of divisions and subdivisions of his report. One thing an author should studiously avoid is dictating a report from notes or from memory without careful regard to the scheme to be followed, and without having in mind all the data to be discussed in the report. A report thus dictated is practically certain to be unsatisfactory and to need much revision if not complete rewriting.

STYLE.

Clearness is the most essential requisite in a report dealing with engineering or technical matters. A report may be dry and uninteresting, but if it is clear it can fulfill the main purpose for which it was written. On the other hand, a report may contain information of high value or it may represent an original investigation of unusual merit, but if the information and the results of the investigation are not presented clearly, the main purpose of the publication is unfulfilled; hence authors should continually strive for clear-

ness of statement. Simple, direct, unadorned sentences are preferable to niceties of rhetorical balance or elaborate circumlocutions.

The author should constantly endeavor to put himself in the place of a hurried reader not particularly familiar with the subject in hand. For this reason the author should avoid the use of unnecessary words, phrases, or clauses, and should strive for conciseness. Repetition of statement is often necessary and should not be avoided when essential to clearness, but unnecessary repetition is not to be permitted. Hence it is highly important that a scheme of headings be prepared before the final writing of a report is begun.

TABLE OF CONTENTS.

Before the author transmits a report to his chief of division or other superior officer he should see that it contains a table of contents and a list of illustrations. The table of contents should give the literal wording of the various headings and subheadings of the text. It should not contain titles of tables. The relative importance of the headings and subheadings should be indicated by suitable indentation. A table of contents given below shows how the rank of headings may be indicated.

CONTENTS.

	Page.
Introduction	5
Use of anthracite or coke.....	6
Plant at Scheveningen, Holland.....	7
Use of bituminous coal.....	8
Plant at a town in Wales.....	8
Recovery of by-products.....	9
Mond-gas plant at Dudley Port, England.....	10
Utilization of tar.....	12
Progress in design of small suction plants.....	12
Plant at a town in Germany.....	13
Use of low-grade coal.....	13
The Jahns "ring" producer.....	14
Use of brown-coal briquets.....	17
Briquet-burning gas producers at Fürstenberg, Germany.....	19
Use of peat.....	21
Peat producer-gas plant at Skabersjö, Sweden.....	22
Peat producer-gas plant at Visby, Sweden.....	24
Preparation of peat at Visby.....	25
Use of blast-furnace or coke-oven gas.....	26

The page numbers in the table of contents should be those of the complete manuscript after its final revision by the author previous to transmission. The list of illustrations should give the main title of each illustration as it is given in the text, but should not contain

lengthy explanations such as often appear in titles of graphic charts or of curves showing the relation of the different factors of a given result. Both the table of contents and the list of illustrations should be in duplicate.

If a report contains much tabular matter, a list of the tables should be transmitted with the manuscript.

INTRODUCTION.

Every report should have a brief introduction setting forth the purpose of the investigation described and its relation to the investigations that the bureau is authorized to conduct.

ACKNOWLEDGMENTS.

The author should give credit to those who have rendered him important assistance in the conduct of the investigation he describes, whether members of the Bureau of Mines or of Federal or State bureaus, or in private life. In particular an author should acknowledge the work of previous investigators and should clearly show his acquaintance with the literature bearing on his investigation. He should avoid giving the casual reader the impression that a similar investigation had not been undertaken before, unless his investigation was distinctly original.

HEADINGS.

Especial attention should be given to headings. It is not necessary that the scheme followed should be elaborate; in fact, overelaboration in subdividing the text should be avoided, but the author should see that his headings are precise and summarize the sections to which they apply. In most reports four grades of headings suffice. The lowest grade employed may be either an italic side heading or a center heading, but a uniform scheme should be followed throughout a report. In general, side headings apply to statements covered by a few sentences. In no case should they be made to apply to passages over a page in length. In the text or body of the paper, when printed, the rank of center headings will be indicated by the use of different faces of type. The author need not concern himself with indicating the particular style of type to be used, as this is a detail for the editors, but the author should not transmit for publication a report without a table of contents that clearly indicates the rank of the headings.

Appropriate headings and subheadings tend to insure balance in a report and the omission of headings may be taken as evidence that the author has not given due care to the preparation of his manuscript. In general, the text of each section or other subdivision of

the report should be complete in itself; in other words, reference to a heading should not be necessary to complete the meaning of the sentence following the heading. Every heading should contain a substantive.

PARAGRAPHING.

Few details make a report clearer or more easily read than proper paragraphing. On the other hand, poor paragraphing confuses the reader. The author should endeavor to build his paragraphs around a central thought, and should avoid jumbling unassociated ideas in one paragraph. Mistakes in paragraphing often involve the resetting of a paragraph and give rise to new errors in correcting proof.

USE OF FIRST OR THIRD PERSON.

An author should be careful to write his report in the same person throughout; that is, he should not refer to himself as "I" and "the writer" in the same report. Either the first or the third person may be used, though, in general, as the bureau is sponsor for the report, the third person is preferable.

CROSS REFERENCES.

The author should avoid frequent cross references; moreover, repeated references to "another part of this report, page —," etc., are unsatisfactory, since they distract the reader's attention. It is better to restate briefly the fact to which reference is made. References to pages by number are especially undesirable, because page numbers can be inserted only after the report has reached the stage of page proof; and the number of page-proof corrections and changes should be as few as possible.

TABLES.

Every table and every chemical analysis or mine section given in tabular form should have a heading. Each statement of an analysis or each table of analyses should show the name of the analyst. If a report contains many tables, their numbers and titles may be separately listed and given on the opening page of the manuscript to follow the table of contents. As a rule, only tables that are of especial importance, are over a page in length, or are mentioned several times in the text should be numbered. Arabic, not Roman, numerals should be used for numbering.

The preparation of tables may require even more careful study than the preparation of the text. Tables have the great advantage of

permitting the presentation of a great variety of related facts in concise form; hence they are indispensable in giving the results of technical investigations. An author should, however, avoid preparing tables that call for greater care in reading than the average reader can be expected to give; in other words, a table that can be printed on a single page or on two pages facing each other is preferable to a table that occupies three or four pages, and is far preferable to one that covers 15 or 20 pages. There are occasions, as in compiling a report covering a large number of tests, when the use of tables that will occupy many printed pages can not be avoided, but in general a table that presents the facts in such form that the reader can take them in at a glance has so many advantages that the possibility of grouping the results of an investigation and presenting these groups in separate tables should be given careful consideration.

The Bureau of Mines has adopted certain styles of presenting results in tabular form. These should be observed by the author. Sections of coal beds are printed as follows:

Section of coal bed in Garnsey mine, at Garnsey.

Section.....	A
Laboratory No.....	3018
Roof, hard shale or sandstone:	<i>Ft. in.</i>
Coal.....	1 9
Mother coal.....	1 1
Shale ".....	1
Coal.....	1 0
Shale ".....	9
"Sulphur" and shale ".....	2
Coal.....	1 3
Floor, fire clay:	
Thickness of bed.....	5 1
Thickness of coal sampled.....	4 1

" Not included in sample.

In tables of analyses or results of tests Arabic, not Roman, numerals should be used to distinguish the columns. When figures are obviously percentages the term "per cent" need not be inserted above the figure column. If chemical elements or compounds are designated by both words and symbols, as "hydrogen (H₂)," "sulphide of iron (FeS)," the symbols should be written within parentheses, as shown. The word "Total" should not be used to designate footings in a table if the numbers given are obviously footings.

In compiling tables the author should observe a reasonable restraint and avoid presenting figures merely because he has gathered or deduced them. In other words, he should not present figures that do not have a direct bearing on the topic that the table is intended to elucidate. In particular he should avoid making tables too large, for reasons already stated.

A careful study of tables in published reports of the bureau will show the number of figures that can go in a line. In making estimates it is well to count a rule as equal to two figures in order to avoid crowding.

Every table should have a heading.

It is not necessary to have all tables typewritten; in fact, type-writing frequently introduces errors from overstruck figures. Tables written in longhand, if a good, black ink is used and if the writing is distinct and the figures are not crowded, make as acceptable copy as typewritten tables.

It is not necessary to number tables unless the author intends to refer to them by number in the text.

Footnote references should be made by small letters, lower case, underscored for italic.

Every tabular statement of an analysis should show the name of the analyst.

A fact that the author should constantly bear in mind is the comparative costliness of tables. The Government Printing Office rate for composition of 6-point tables (in bureau publications practically all tables in which the columns are separated by rules are printed in 6-point type) is about six times that for plain text in 10-point type, the size generally used. Moreover, corrections in tables are much more expensive than are those in plain reading matter, consequently, all figures in a table should be carefully checked before being submitted for publication, and blanks should not be left to be filled on galley proof.

TYPOGRAPHIC STYLE.

The Public Printer, by act of Congress, has supervision of the style of Government reports, and the instructions contained in the Style Book of the Government Printing Office are, with a few minor exceptions, followed by the Bureau of Mines. Authors must remember that these styles have precedence over others that they may prefer, and that deviations to suit individual preference can not be permitted. The styles adopted by technical periodicals in the United States or in Europe, or those followed by editors of scientific societies, even though such styles may be excellent and in the opinion of an author far superior to those used by the bureau, are not to be regarded as precedents for departure from the styles adopted.

GEOLOGIC NAMES.

In geologic names, the author should follow the latest usage of the United States Geological Survey. He should avoid using local names, except in quotation marks, and should clearly explain the

relation of such local names to the names adopted by the Geological Survey. Accepted designations for eras, systems, and series are given in the following table:

Geologic eras, systems, and series.

Era.	System.	Series.
Cenozoic.....	Quaternary.....	(Recent. Pleistocene (replaces "Glacial"). Pliocene) Neocene may be used when it is impossible to differentiate Pliocene and Miocene.
	Tertiary.....	Oligocene. Eocene.
	Cretaceous.....	(Upper (Gulf may be used provincially). Lower (Comanche and Shasta may be used provincially).
	Jurassic.....	Upper. Middle. Lower.
Mesozoic.....	Triassic.....	Upper. Middle. Lower.
	Carboniferous.....	(Permian. Pennsylvanian (replaces "Upper Carboniferous"). Mississippian (replaces "Lower Carboniferous").
	Devonian.....	Upper. Middle. Lower.
	Silurian.....	Upper (Cincinnatian may be used provincially). Middle (Mobawkian may be used provincially). Lower.
Paleozoic.....	Ordovician.....	(Saratogan (or "Upper Cambrian"). Arcadian (or "Middle Cambrian"). Georgian (or "Lower Cambrian").
	Cambrian.....	
	(Algonkian) pre-Cambrian. (Archean.)	
Proterozoic.....		

The Geological Survey does not approve the use of the words "Coal Measures," "Red Beds," and "Permo-Carboniferous" as titles except when they are printed in quotation marks, but it uses these designations in a common-noun sense.

GEOGRAPHIC NAMES.

Authors will expedite the work of the editor by giving attention to the spelling of geographic names. The decisions of the United States Geographic Board, as published by the Government Printing Office, have preference. Atlas sheets of the United States Geological Survey (latest editions) rank next, and the Postal Guide next, and then come atlases issued by private firms.

PETROGRAPHIC NAMES.

In mentioning rocks of known types, an author, in case exactness of statement is required, should use the nomenclature adopted by the United States Geological Survey. As a rule, an author should not attempt to describe in detail igneous rocks that have not been described by the Survey, but should limit himself to the use of general

or unspecific terms such as "granite," "trap," "basalt," "gabbro," "diorite," and "porphyrite." He should take care to adhere to accepted usage in the designation of sedimentary rocks; for instance, he should distinguish shale from slate. In describing sections of coal beds such miners' terms as "mother coal," "rash," and "sulphur" are permissible, but quotation marks should be used to indicate that the terms are not precise.

PERSONAL TITLES.

The designations Dr., Prof., Mr., etc., should be used only in acknowledgment of courtesies or services, or in making personal mention. They should not be prefixed to the names of persons cited as authors or as coworkers in a given investigation. The following forms illustrate acceptable usage:

Burrell states * * *

The causes of the explosion are discussed by Rice in chapter 3.

Analyst, H. C. Porter.

This sample was analyzed by Dr. Porter.

The author wishes to thank Mr. W. J. Hunter for * * *

Through the kindness of Prof. H. C. Brown * * *

CAPITALIZATION.

Some important rules of the Government Printing Office are given below:

Capitalize geographic terms and terms of civil divisions, as Bay, Cape, County, etc., singular or plural, when either before or after, or a part of the name, also the plural form when used before two or more names.

Capitalize also the words "hills," "islands," "mountains," or "springs" immediately following the names of groups of natural features, as the Black Hills, Hawaiian Islands, Allegheny Mountains.

Capitalize State and Territory, whether singular or plural, terms used to designate groups of States, as Pacific, Middle, Northwestern, and all terms denoting parts of the United States, as the North, the South, but lower-case adjectives in such instances as northern Pacific States, southern Appalachian region.

Capitalize the word "government" when referring to the United States Government or to foreign Governments, and in such phrases as Government ownership, but use lower-case when the word is used in an abstract sense, as the seat of government, the State government.

Capitalize the word national when it precedes any word that is capitalized, as National Government, otherwise lower case, as national pride.

Capitalize the following standing alone and used as a synonym for the name in parentheses, as when used as adjective:

Canal Zone (Panama).

Falls (Niagara).

Gulf (of Mexico).

Isthmus (of Panama).

Lakes (Great Lakes).

Plains (Great Plains).

Sound (Long Island; Puget).

ORTHOGRAPHY.

The Government Printing Office has adopted Webster's New International Dictionary as the authority for spelling and compounding words, and this dictionary will be the authority for the publications of the Bureau of Mines. There are, however, a few exceptions which should be noted:

afterward	canyon	further (not distance)	kilowatt-hour
aluminum	cut-through	gage	plat (of land)
briquet	eolian	horsepower-year	plot (diagram)
break-through	farther (distance)	inclose	reconnaissance
candlepower-hour	fluor spar	inby	reinforce
can not	forward		

The dictionary shows what words are to be regarded as compound words.

ABBREVIATIONS.

Fort and Mount should not be abbreviated. St. should be used for Saint.

Given names should be written in full (Benjamin, William), and not contracted (Ben., Wm.). As a rule, single initials should not be used; write Abraham Lincoln, not A. Lincoln, but write A. L. Brown.

The following abbreviations are used in describing public-land divisions and should not be varied: In the SE. $\frac{1}{4}$ NW. $\frac{1}{4}$ sec. 32, T. 17 N., R. 13 E.; in sec. 25; secs. 32 and 33; Tps. 17 and 18; Rs. 13 and 14.

Names of railroads should be spelled out, but railroad or railway may be abbreviated (R. R. or Ry.). For correct names of railways, reference should be made to the Railway Guide or to the Style Book of the Government Printing Office.

Decimals, degrees, dimensions, distances, enumerations, money, percentage, weights, and similar matter should be expressed in figures, as 5° 10', 16 miles, 29 cubic feet, 32 pages, 115 bushels, 12 per cent, 32 pounds, \$5,000. Spell out numbers used alone when less than 10: seven mines; eight hours; but, the samples were collected at intervals of 2, 3, 5, and 9 minutes.

Use "per cent" with figures only. Write "large percentage," "percentage by volume," but "25 per cent." The "per cent" sign (%) should not be used in the text nor in tabular matter.

In stating dimensions, say 3 by 4 feet, not 3 x 4 feet.

Spell out any common fraction that stands alone, as "one-half"; but write $1\frac{1}{2}$, $\frac{1}{2}$ -inch pipe.

Do not use common and decimal fractions indiscriminately.

The "short and" (&) is to be used in firm or corporation names: Chicago, Milwaukee & St. Paul Railroad; Keuffel & Esser; Way-clark Powder & Dynamite Co.

Names ending in "s" take the apostrophe and "s" in the possessive case singular, as Thomas's, Williams's, Jones's.

Do not use ' and " in the text for feet and inches. Over figure columns in tables use "*Feet*" or "*Ft. in.*", underscored for italic letters.

In stating temperature readings and dips, strikes, and directions, the degree mark should be used; the temperature was 120° C.; the strike is N. 30° E. When figures are not given spell out, as the dip is southwest.

Use the following abbreviations for names of States and Territories after names of post offices, counties, forts, reservations, Indian agencies, or military or naval stations:

Ala.	Ga.	Minn.	N. Y.	Tenn.
Ariz.	Ill.	Miss.	N. C.	Tex.
Ark.	Ind.	Mo.	N. Dak.	Va.
Cal.	Kans.	Mont.	Okla.	Vt.
Colo.	Ky.	Nebr.	Oreg.	Wash.
Conn.	La.	Nev.	Pa.	W. Va.
Del.	Md.	N. H.	R. I.	Wis.
D. C.	Mass.	N. J.	S. C.	Wyo.
Fla.	Mich.	N. Mex.	S. Dak.	

Alaska, Idaho, Iowa, Maine, Ohio, and Utah should not be abbreviated.

QUOTATIONS AND REFERENCES.

The editor can not undertake to verify all references and quotations; hence an author should take great pains to have them accurate. In excerpts the exact words of the original text should be given, but such details as spelling, capitalization, and punctuation need not be followed literally unless, for any reason, the exact form of the original is deemed necessary. Omitted words or phrases are to be indicated by stars (* * *).

FOOTNOTES.

Authors often use footnotes improperly. Footnotes, as a rule, should not contain matter that can go as well in the text, but should be restricted largely to references to works cited. For reference marks the bureau uses underscored superior letters in both text and tables. In tables the reference is placed before a figure in figure columns and after a word in columns containing words. In the text a footnote should be written just below the line in which the reference mark is given and should be separated by rules from the text above and below. In tabular work footnotes should be written at the bottom of a table unless a table is several pages long, in which case they should appear at the bottom of the page containing the references that they are intended to explain. In giving names of persons cited the author should not omit initials, as these may be necessary for identification. It is not necessary, however, to give initials in the text. Below are

some forms for footnotes in the style adopted by the Bureau of Mines:

Davis, C. A., The uses of peat for fuel and other purposes: Bull. 16, Bureau of Mines, 1911, p. 82.

Clark, H. H., Electric lights for use about oil and gas wells: Tech. Paper 79, Bureau of Mines, 1914, p. 7.

Rice, G. S., Coal-dust explosions: Miners' Circular 3, Bureau of Mines, 1911, p. 18.

Bastin, E. S., Economic geology of the feldspar deposits of the United States: U. S. Geol. Survey Bull. 420, 1910, p. 80.

Lindgren, Waldemar, Graton, L. C., and Gordon, C. H., The ore deposits of New Mexico: U. S. Geol. Survey Prof. Paper 68, 1910, p. 162.

Leith, C. K., The Mesabi iron-bearing district of Minnesota: U. S. Geol. Survey Mon. 43, 1903, p. 201.

Hamilton, Alice, White-lead industry in the United States, with an appendix on the lead-oxide industry: Bureau of Labor Bull. 95, July, 1911, p. 189.

Bertrand, C. E., Premières conclusions générales sur les charbons humiques: Compt. rend., t. 127, 1898, pp. 767-769.

In the references cited the order observed is as follows: (1) Surname of author followed by his initials; (2) title of book or paper; (3) series or technical title abbreviated in the manner indicated below; (4) volume number; (5) date; (6) page number.

The page number, the volume number, and the year of publication should always be given. A selected list of abbreviations used by the Bureau of Mines for footnote citations is given herewith. All footnote references should be in the same style. The names of counties, States, and cities are spelled out in all cases where the abbreviation would not be obvious; "Am." is used for American, but not for America, and the usage of foreign languages in the capitalization of nouns and adjectives is followed, except that the abbreviation of the first word of a society's name should always begin with a capital. Forms unlike those indicated, although they are adopted by technical papers and scientific societies, are not now used by the Bureau of Mines.

Style used by the Bureau of Mines in footnote references.

Abhandl. K. Akad. Wiss. Berlin.
Am. Chem. Jour.
Am. Gas Light Jour.
Am. Geologist.
Am. Jour. Sci.
Ann. chim. phys.
Ann. des mines.
Ann. des mines Belgique.
Bergbau.
Ber. Deut. chem. Gesell.
Bull. Can. Min. Inst.
Bull. Soc. chim. France.
Bull. Soc. ingen. civ. France.
Bull. Soc. l'ind. min.
Bureau of Standards Bull.
California Derrick.

Cassier's Mag.
Canada Dept. Mines Bull.
Canadian Engineer.
Canadian Min. Jour.
Canadian Min. Rev.
Chem. Abs.
Chem. News.
Chem. Zentralb.
Chem. Rev. Fett-Harz-Ind.
Chem. Ztg.
Coal Age.
Colorado Min. Bur.
Cong. géol. internat.
Coll. Guard.
Compt. rend.
Dingl. poly. Jour.

Style used by the Bureau of Mines in footnote references—Continued.

Econ. Geol.	Metal Ind.
Electrochem. and Met. Ind.	Metall und Erz.
Engineer (London).	Mines and Minerals.
Engineering.	Min. and Sci. Press.
Eng. Mag.	Mining Mag.
Eng. and Min. Jour.	Mineral petrog. Mitt.
Eng. News.	Mining World.
Eng. Rec.	Oest. Ztschr. Berg-Hüt.
Gasmotorentechnik.	Petermann's Mitt.
Génie civil.	Petroleum Rev.
Geol. Mag.	Proc. Am. Assoc. Adv. Sci.
Geol. Soc. America.	Proc. Colorado Sci. Soc.
Indiana Dept. Geol. and Nat. Res.	Proc. Eng. Soc. Western Pennsylvania.
Glückauf.	Proc. Lake Superior Min. Inst.
Iron Age.	Proc. Roy. Soc. London.
Iron and Coal Trades Rev.	Power.
Jahrb. Berg-Hüt. Sal. Preuss.	Rauch und Staub.
Jour. Am. Chem. Soc.	Rev. univ. des mines.
Jour. Am. Soc. Mech. Eng.	Rev. métal.
Jour. Anal. and Appl. Chem.	School of Mines Quart.
Jour. Assoc. Eng. Soc.	Sci. Am.; Sci. Am. Suppl.
Jour. Canadian Min. Inst.	Stahl und Eisen.
Jour. Chem. Met. Min. Soc. South Africa.	Texas Univ. Min. Survey Bull.
Jour. Chem. Soc.	Trans. Am. Electrochem. Soc.
Jour. chim. phys.	Trans. Am. Inst. Min. Eng.
Jour. Franklin Inst.	Trans. Inst. Min. Eng.
Jour. Gasbel.	Trans. Inst. Min. and Met.
Jour. Geology.	Univ. Illinois Eng. Exper. Sta. Bull.
Jour. prakt. Chem.	U. S. Dept. Agr.
Jour. Soc. Chem. Ind.	U. S. Geol. Expl. 40th Par.
Kansas Univ. Geol. Survey.	U. S. Geol. Survey.
K. preuss. geol. Landesanstalt.	U. S. Nat. Mus.
Liebig's Annalen.	Ztschr. anal. Chem.
Maryland Geol. Survey.	Ztschr. angew. Chem.
Met. and Chem. Eng.	Ztschr. Ver. deut. Ing.

A manuscript should not be transmitted for publication until the footnote references are complete; that is, each reference to a periodical or book should give the date, including day of the month if the reference is to a weekly publication, the number of the volume, and in every case the page. In referring to foreign periodicals use the equivalent term for volume—in German, Band or Jahrgang; in French, tome. Give the original, not the translated, title of the article. Failure to attend to these details may result in the manuscript being returned to the author before editing is begun.

In making footnote references it is better to repeat the reference in full each time it is made than to compel the reader to turn back even one page, but "idem" may be used in a second reference to the same work immediately after the first reference.

ILLUSTRATIONS.

The character of the illustrations has much to do with the appearance of a publication and the impression it makes on the reader. For this reason authors should exercise care both in the selection of subjects and in the choice of photographs made. The purpose of

an illustration is to clarify or supplement the description in the text, hence illustrations that are merely decorative will be regarded as unessential and will not be published in reports of the bureau. Line cuts are in many cases preferable to half tones, particularly for showing details, such as the parts of a simple machine, the arrangement of pipes in a boiler, the construction of a mine stopping, etc.

All illustrations must be numbered in the order in which they are mentioned in the manuscript, and a list of the illustrations must accompany the manuscript. The place at which an illustration is to appear in the text should be indicated by the insertion there of the number and title of the cut. In general the cut should appear where it is first discussed. Every illustration must be mentioned in the text.

Photographs may be on either glossy or dull-finished paper. If a photograph is clear and sharp it should be on a bright-finished paper, but if it lacks sharpness and will presumably need retouching before engraving, or if it is to be lettered, it should be on a dull-finished paper. Line drawings should be prepared on a good quality of white paper; yellowish paper should not be used.

A drawing that has been made with care may, by slight improvement in the lettering or other minor change, be made suitable for direct reproduction by the engraver. For the same reason india ink, or a black, indelible, and preferably waterproof ink of good quality, should be used for the lines of the drawing, which should be sharp and clear. Lettering by the author should be plainly done with a soft pencil, not in ink.

The size of a drawing should be determined by the nature of the subject. Graphic logs or charts covering a number of items must, of course, be larger than an indicator diagram or the detail of a joint in a mine timber. In general, the drawing for a text figure should be larger than the figure as it will appear in the report, but should not be so large as to make its reproduction difficult. Most figures should be drawn two or three times as large as they are to be printed. It is believed that many line drawings will not need to be inked in, as they can be reproduced by wax engraving at less expense to the Bureau than by inking in and then engraving by zinc etching or lithography.

Illustrations to accompany reports prepared at the Pittsburgh office will be prepared by the section of computing, drafting, and photography. Illustrations for authors at other offices may or may not be prepared at Pittsburgh. The desirability of having the work done at Pittsburgh will be determined by the director or the assistant director.

In general, drawings intended for direct reproduction by photographic processes, as zinc etching or photolithography, should not be

inked in until they have been examined and properly marked by the editor.

The determination of the engraving process to be used is the duty of the editor, subject to the approval of the director.

The list of illustrations to accompany the manuscript transmitted by the author should give the titles of the plates and text figures separately grouped. Plate numbers are in Roman numerals, figure numbers in Arabic; subdivisions of plates are lettered with italic capitals, subdivisions of figures with roman capitals; parts of figures, as details of apparatus, machinery, etc., are lettered either in roman capitals or in italic lower case, as "figure 4, A," or "figure 4, a." The list of illustrations should not contain lengthy explanations of particular features illustrated, but these should appear in the text or should be given in the legends or titles at the appropriate places. The legends of the text figures should give the title of the cut and all essential details, including the explanation of symbols or letters that appear on the figure, unless these are fully explained in the text adjacent. Descriptions of the plates, including the matter to be printed on or opposite them, should be written on separate sheets and attached to the illustrations. The descriptions should include mention of all reference letters.

EDITING.

Illustrations for some reports may be submitted in advance of the text in order that they may be properly marked for reproduction under the direction of the editor. This exception applies particularly to reports containing a large number of drawings or photographs that from their character will presumably need much lettering or retouching before they are ready for reproduction.

When the editors begin work on a report they are to examine carefully all illustrations submitted by the author and to reject such as do not have sufficient value to justify reproduction. The editors also should rearrange the illustrations, having line drawings made from photographs in all cases in which such a change is feasible and advantageous. Also they must mark the illustrations for the engraver and indicate details that require special attention in engraving. Usually the drawings, photographs, etc., as prepared for the engraver will be returned to the author for approval. The author should carefully note the changes made by the editors, should make sure that the illustrations as prepared bring out essential details and show all features to which the text calls attention, and should make sure that changes will not be needed in proof.

The author should approve, by initialing, all the illustrations returned to him after preparation by the editors. In case he wishes

any change or correction made, he should indicate this clearly on the drawing itself or on a note attached to it. After an illustration has been approved by the author and fully corrected by the editor, no further changes will be permitted except by order of the director or the assistant director.

ENGRAVING.

As a rule, all line drawings, unless too large, will be reproduced as text figures. Photographs to be used as illustrations in bulletins will, as a rule, be reproduced as half-tone plates, printed separately from the text on special paper, and bound into the book at the proper place. Cuts larger than page size may be printed on inserts, or put in a pocket at the end of the book, or placed in a separate case. Photographs to be used as illustrations in miners' circulars will be printed as text figures. Photographs to be used as illustrations in technical papers may be reproduced either as text figures or as plates, as the editor may determine.

PROOF.

Changes in proof of plates and figures from the copy sent the engraver will not be permitted except by authority of the Washington office; the engraver is entitled to an extra charge for making them, and they may necessitate reengraving. Consequently, the author and the editor should make sure that all necessary changes in an edited drawing or photograph are correctly indicated before the copy is transmitted for engraving.

Proofs of illustrations, with editorial corrections, will be sent to authors. Usually, three days will be allowed for the examination of such proofs—that is, proof of the illustrations prepared for a paper will be forwarded to the author, but the printer's copy of the proof will be returned to the printer within six days after its receipt from him, whether or not the author has in the meantime returned the proof sent him—this time limit being set because of the terms of contracts sometimes made by the Public Printer with engravers. A time limit of 10 days will be allowed for the return of proofs sent to Denver and of 15 days for proofs sent to San Francisco.

Because of the great differences in the time required for engraving and the many delays incident to printing, proofs of some of the illustrations for a report should not be held by the author until proofs of the others are received from the Public Printer, neither should proof of any illustration be held for proof of the text. It will at times be impracticable to furnish an author the galley proof of the text with proof of the illustrations, but, whenever practicable, proof of the illustrations will be attached to the galley proof sent the author.

USED MATERIAL.

Most of the original material, whether drawings or photographs, used for illustrations is to be kept available for reengraving or for other use. The finished copy for each illustration will be kept at the Washington office for not less than six months. In case an author desires the use of an illustration that has appeared in a publication of the bureau, he should give the number of the publication and of the illustration. Used material, when available, will be furnished to unofficial publications, on request, without cost. Copies of electrotypes will be furnished such publications at cost. Requests for electrotypes for such use should be made to the director.

PROOF READING.

The author should read proof with extreme care, not glance over it hastily. He should give particular attention to matter in which errors are liable to be made, as formulas, equations, and footnote references. In order to make necessary corrections in his proof, and in order to understand the significance of the marks made by the editors and proof readers, the author must know the use and meaning of the marks most frequently used in correcting proof. A list of such marks and a sample of proof marked for correction are given on pages 100 and 101.

The author should indicate each change or correction that he desires made by placing marks on the margin of the proof, except as noted below. Red or blue pencil marks are most easily noted by the editors.

If anything is to be cut out, a line is drawn through it and the dele mark (S) is placed in the margin. This mark should never be used when something is to be substituted for the matter cut out. If anything is to be inserted in the text, a caret (^) should be placed at the point where the insertion is to be made, and the matter to be inserted should be written in the margin. A caret should not be placed in the margin also. A stop mark (/) is used to separate adjacent corrections in the margin. A stop mark is also used to call attention to correction marks that might not be noticed if written alone. Every period inserted should be placed in a circle. A space mark (#) is used to designate that more space is to be used between two words, and the close-up sign (C) to indicate less space. All correction marks should be made so clearly that they will not be misunderstood. Should additions of too great length for convenient insertion in the margin be necessary on galley proof, these should be written on sheets or slips of paper, which should be securely pinned, but not pasted, to the proof, and the point where the added matter is to be inserted should be clearly indicated. Authors should

not write long inserts on the proof. The principal marks used in proof reading are as follows:

⊙	Period.
,	Comma.
-	Hyphen.
:	Colon.
;	Semicolon.
'	Apostrophe.
"	Quotations.
□	Em quadrat.
$\frac{1}{m}$	One-em dash.
$\frac{2}{m}$	Two-em parallel dash.
∩	Push down space.
⊂	Close up.
✓	Less space.
^	Caret—left out, insert.
9	Turn to proper position.
#	Insert space.
⌈ or ⌋	Move to left or to right.
⌊ or ⌋	Move up or move down.
te.	Transpose.
----- or stat.	Let it stand.
8	Dele—take out.
⊕	Broken letter.
¶	Paragraph.
No ¶	No paragraph.
w. f.	Wrong font.
~ or eq. #	Equalize spacing.
≡ or caps.	Capitals.
= or s. c.	Small capitals.
l. c.	Lower-case.
Ⓐ or 1	Superior or inferior.
— or ital.	Italic.
rom.	Roman.
[/]	Brackets.
(/)	Parentheses.

A specimen of corrected proof is given below:

TYPOGRAPHICAL ERRORS.

6 pt. ital. caps.

d.c. It does not appear that the earliest printers had any method of correcting errors before the form was on the press. The learned ~~The learned~~ correctors of the first two centuries of printing were not proof-readers in our sense; they were rather what we should term office editors. Their labors were chiefly to see that the proof corresponded to the copy, but that the printed page was correct in its ~~Latinity~~ ~~that the words were there~~, and that the sense was right. They cared ~~but~~ little about orthography, bad letters, or purely printer's errors, and when the text seemed to them wrong they consulted fresh authorities or altered it on their own responsibility. Good proofs, in the modern sense, were ~~not~~ possible until professional readers were employed; men who had first a printer's education, and then spent many years in the correction of proof. The orthography of English, which for the past century has undergone little change, was very fluctuating until after the publication of Johnson's Dictionary, and capitals, which have been used with considerable regularity for the past 80 years, were previously used on the miss or hit plan. The approach to regularity, so far as we have, may be attributed to the growth of a class of professional proof readers, and it is to them that we owe the correctness of modern printing. More errors have been found in the Bible than in any other one work. For many generations it was frequently the case that Bibles were brought out stealthily, from fear of government interference. They were frequently printed from imperfect texts, and were often modified to meet the views of those who published them. The story is related that a certain woman in Germany, ~~who was~~ the wife of a printer, and had become disgusted with the continual assertions of the superiority of man over woman which she had heard, hurried into the composing room while her husband was at supper and altered a sentence in the Bible, which he was printing, so that it read Narr instead of Herr, thus making the verse read "And he shall be thy fool" instead of "And he shall be thy Lord." The word, not was omitted by Barker, the King's printer in England in 1632, in printing the seventh commandment. He was fined £3,000 on this account.

11 v
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□

8/f/rom.

✓ w.f.
15/2

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3/8

stat.
8
3/tr

3/
tr

1/w.f.

8 lead

← lead.

Out; see copy
h

l.c./who

11
14/2

14/2
14/2
14/2

over

4/?

It is of the utmost importance that authors prepare their manuscript carefully; they should avoid transmitting manuscripts containing such omissions as those of figures in tables or of page references in footnotes, with the intention of adding these on the galley proof; and they should take especial care to verify figures in tables by careful checking. Although it may happen in the case of a particular investigation that the publication of results by some other investigator, the detection of error in previous work, or the obtaining of new facts may necessitate changes in the galley proof, yet in general only reasonable corrections can be made in the galley proof and extensive or radical changes are forbidden. Only slight changes will be permitted in page proof.

Edited manuscript will be sent to the author whenever such action is practicable, also galley proof. Page proof will be sent if there are many changes in galley proof or the author's approval of page proof is desired. Edited manuscript and proof will bear suggestions and queries; these the author should carefully note. Especial attention should be given to answering all queries. Failure to answer them will usually cause the return of proof to the author. Proof should be corrected as soon as practicable and then returned immediately to the Washington office.

SPECIAL REQUISITIONS FOR PRINTING.

Requisitions for the printing of publications or of office forms will not be made special ("rush") except in cases of emergency, and in such case the reasons must be stated in writing by the division chief requesting the work, and must be approved by the director or the assistant director.

OFFICE FORMS.

The name of the department and of the bureau should be printed at the head of all forms, but if the form is crowded the name of the department and bureau may be omitted if the form is not to be used outside the bureau.

Blanks should conform to equal divisions of one of the standard sizes of paper.

Forms should be ordered in sufficient quantity to prevent frequent reprinting, but care should be taken not to accumulate a large stock that may become obsolete. In general a year's supply should be ordered if the quantity needed for a year is 5,000 copies or less, and six months' supply if the quantity needed for a year is more than 5,000. All permanent forms or matter that is to be reprinted should be electrotyped.

Pamphlets, orders, and circulars should, as far as practicable, be printed in document measure and octavo size.

Requisitions from a field office for the printing of new forms or for the revision of old forms must be accompanied by duplicate copy. The duplicate copy is to be edited to correspond with the printer's copy and is to be filed at the Washington office for reference in case any questions arise as to the correctness of the copy furnished by the person making the requisition.

TRANSMISSION OF INSTRUCTIONS TO THE PUBLIC PRINTER.

Instructions in regard to work ordered from the Public Printer are transmitted through the clerk in charge of publications, Secretary's office.

LIST OF FORMS USED BY THE BUREAU.

The following list of forms is necessarily incomplete, as new forms are issued from day to day and old ones are superseded or abolished:

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